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STATE OF COLORADO

BUREAU OF MINES

State Capitol, Denver

JOHN T. JOYCE, *Commissioner of Mines*

ANNUAL REPORT

for the Year 1935

BRADFORD-ROBINSON PRINTING CO.
DENVER, COLORADO
1936

DATE DUE

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LETTER OF TRANSMITTAL

To His Excellency,

THE HONORABLE EDWIN C JOHNSON,
Governor of Colorado.

Sir: In compliance with Section 3392 of the Compiled Laws of Colorado, 1921, I have the honor to transmit herewith the Annual Report of the State Bureau of Mines for the year 1935.

Respectfully submitted,

JOHN T. JOYCE,
Commissioner of Mines.

State Capitol,
Denver, Colorado,
June 15, 1936.

FINANCIAL STATEMENT

1933-1935

Appropriations for the fiscal years 1933-1935:		
Salary, Commissioner	$ 6,000.00	
Salaries, 4 Inspectors	15,000.00	
Salary, Clerk and Assistant Curator	3,600.00	
Salary, Stenographer and Assistant Clerk	3,000.00	
		$27,600.00
Traveling Expenses, Commissioner and Inspectors		10,000.00
Incidental Fund		1,000.00
Appropriations House Bill 397, Session Laws, 1933		3,212.50
		$41,812.50

DISBURSEMENTS

Salary—		
Commissioner	$ 5,790.00	
Inspector, District No. 1	4,074.00	
Inspector, District No. 2	4,074.00	
Inspector, District No. 3	4,074.00	
Inspector, District No. 4	4,074.00	
Clerk and Assistant Curator	3,398.30	
Stenographer and Assistant Clerk	2,894.88	
Extra Help	54.00	
Retirement Fund	941.29	
Group Insurance	9.00	
		$29,383.47
Traveling Expenses, Commissioner and Inspectors		10,802.56
Incidental Expenses		924.68
*Unexpended Balance		701.79
		$41,812.50
Total Appropriation		$41,812.50
Total Disbursements	$41,110.71	
*Unexpended Balance	701.79	
		$41,812.50

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*Due to salary cuts by Senate Bill 337, Session Laws 1933, etc.

PERSONNEL OF THE BUREAU OF MINES OF THE STATE OF COLORADO

JOHN T. JOYCE, Commissioner of Mines	Denver
GEORGE BECKER, Inspector, District No. 1	Denver
HERRICK McLEOD, Inspector, District No. 2	Colorado Springs
R. J. MURRAY, Inspector, District No. 3	Salida
D. C. McNAUGHTON, Inspector, District No. 4	Silverton
ETHEL F. McCARTHY, Chief Clerk	Denver
MRS. A. M. NICKERSON, Stenographer and Assistant Clerk	Denver

DISTRICTS OF INSPECTION

DISTRICT No. 1—[a]Adams, Arapahoe, Boulder, Clear Creek, Denver, Gilpin, Grand, Jackson, Jefferson, Larimer, Logan, Moffat, Morgan, Phillips, Routt, Sedgwick, Washington, Weld and Yuma counties.

DISTRICT No. 2—[b]Baca, Bent, Cheyenne, Crowley, Custer, Douglas, Elbert, El Paso, Fremont, Huerfano, Kiowa, Kit Carson, Las Animas, Lincoln, Otero, Prowers, Pueblo and Teller counties.

DISTRICT No. 3—[c]Chaffee, Delta, Eagle, Garfield, Lake, Mesa, Park, Pitkin, Rio Blanco and Summit counties.

DISTRICT No. 4—[d]Alamosa, Archuleta, Conejos, Costilla, Dolores, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan and San Miguel counties.

On August 2nd, 1928, all former Departmental orders of temporary transfers from one district to another were vacated and in lieu thereof the following temporary changes in the different districts were made by order of the Commissioner of Mines, to-wit:

[a] All of the county of Summit and that part of Park County lying north and west of a line drawn from the southwest corner of Jefferson County to the southwest corner of Park County were temporarily transferred from District No. 3 to District No. 1.

[b] That part of said Park County lying south and east of said line was temporarily transferred from District No. 3 to District No. 2.

[c] That part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, that part of Saguache County lying south and east of the Continental Divide and all of the counties of Mineral, Rio Grande, Conejos, Alamosa and Costilla were temporarily transferred from District No. 4 to District No. 3.

[d] All of the counties of Mesa and Delta were temporarily transferred from District No. 3 to District No. 4.

The remainder of all said districts to be left intact as now established by law until further changes are made by order of the Commissioner of Mines, or by the legislature of the State of Colorado.

INTRODUCTION

The activities of the Bureau of Mines during 1935 were confined to the usual routine, no funds for any special work being provided.

The four inspectors visited practically all of the operating metal mines, quarries, mills, smelters and railroad tunnels at least once during the year. Most of the larger operations were inspected more than once. The object of these inspections is to eliminate, as far as possible, unsafe conditions and practices in the operation of such properties. In general, this work meets with the lively cooperation of the operators.

The Commissioner and Inspectors are anxious to help the mining industry in every legitimate manner and wish to be called upon whenever their services can be used.

Inquiries regarding the mines and mineral resources of the state and questions regarding the demand and market for less common mineral products are constantly coming into the Bureau. An earnest endeavor is made to furnish the information desired. Helpful cooperation is often received from the Colorado Geological Survey, the Colorado Mining Association, the United States Bureau of Mines and the United States Geological Survey.

The Commissioner takes this opportunity of expressing his appreciation of the loyal and efficient services that have been rendered by the entire personnel of the Bureau during the past year.

METAL MINING IN COLORADO, 1935

By John T. Joyce

(Commissioner of Mines)

The total production of the mines of Colorado in gold, silver, copper, lead and zinc during the year 1935 was $17,423,497.00 as shown in Table No. 1 inserted between pages 26 and 27 of this report. The ten leading counties were as follows: In the order named, Teller first, Eagle second, Park third, San Juan fourth, Lake fifth, Boulder sixth, Gilpin seventh, Clear Creek eighth, Ouray ninth, and SanMiguel tenth. The figures show a total increase of $2,538,528.00 over 1934, nearly 15%, and an increase of over 121% over 1933, the year that the price of gold began its upward trend. The total value of gold produced by the mines of Colorado for 1935 was $12,297,145.00, an increase of $941,075.00 over 1934, about 8.5%, and of $6,090,469.00 over 1933, or about 99%. In 1935 Colorado mines produced $3,399,114.00 in silver, an increase of $1,152,222.00, a little over 51% over 1934, and exceeded the production of 1933 by $2,633,965.00, an increase of about 243% over that year.

The ten leading gold producing counties in 1935 were as follows in the order named: Teller first, with a production of $4,483,570.00; Park, $2,563,190.00; Boulder, $770,070.00; Gilpin, $690,760.00; Clear Creek, $589,750.00; Lake, $540,330.00; San Juan, $536,795.00; Ouray, $432,495.00; San Miguel, $428,435.00, and Eagle, $351,225.00. The remaining principal counties range from $2,000.00 to $279,510.00 produced by Rio Grande County, being an increase of $235,506.00 over $44,006.00 in 1934, or about 534%, principally because of the recovery of the Little Annie group of mines at Summitville.

The revival of the mining industry, even though it is only in a fractional degree, as compared with its former activity, has been one of the major factors toward greater prosperity in the United States and also toward the permanent relief of unemployment. In the State of Colorado and all of the states of the Western fields this seems to be especially true. Reports constantly published in the columns of the leading journals of the country tell of remarkable revival of various constructive industries, such as public and residential buildings, utility plants, factories, schools, office buildings, etc., automobiles, aeroplanes, naval vessels, ships of various kinds, etc. These industries naturally consume enormous quantities of the base and non-ferrous metals and it does not appear unreasonable to expect an appreciable advance in the market price thereof in the near future. This would be followed by a tremendous increase of activities and employment in the mining districts of Colorado and the Western fields. Since gold and silver seem to be the chief inspiration for increased mining activities at the present time, the following compilation of the world's total production of these precious metals by continents taken from the 1935 Year Book published by the American Bureau of Metal Statistics might be both opportune and interesting.

World production of Gold and Silver, in fine ounces, given by continents:

	Gold	Silver
North America	7,599,283	131,658,873
Central America and West Indies	150,000	3,000,000
South America	1,168,389	23,455,385
Europe	6,089,485	15,692,275
Oceania	1,365,982	11,923,066
Asia	1,694,000	16,954,000
Africa	12,593,218	5,274,455
Totals	30,660,357	207,958,054

Ratio of production for 1935, 6.78 ounces of silver to one ounce of gold, and for the past five years was 7.16 ounces of silver to one ounce of gold.

The Western Hemisphere, embracing the countries of North, South and Central Americas and the West Indies, produced a little more than 29% of the world's production in gold and more than 76% of its silver.

Gold and Silver Production by the countries of the North American continent, in fine ounces:

Country	Gold	Silver
United States	3,618,843	38,322,000
Canada	3,283,121	16,624,426
Mexico	682,319	75,587,447
Newfoundland	15,000	1,125,000
Totals	7,599,283	131,658,873

North America produced over 24.8% of the total world's production of gold, and 63.4% of the silver.

Of North America's total production in gold, the United States produced 47.6%; Canada, 43.2%; Mexico, 9.0%; and Newfoundland, 0.2%. Of the total silver production, the United States produced 29.10%; Canada, 12.63%; Mexico, 57.41%; and Newfoundland, 0.86%.

Table No. 1 of this report, giving the total production of Colorado mines for the year 1935 in gold, silver, copper, lead and zinc, will show that Colorado produced nearly 10% of the gold of the United States and about 12.5% of its silver.

The mining fields of Colorado are confined mostly to that part of the state lying west of Range 68 West of the Sixth Principal Meridian which passes through the City of Denver, extending westerly to the Utah line, and from Wyoming on the north to New Mexico on the south. The total area embraced within this territory is about 58,000 square miles, about one-half of which is highly mineralized. Of this vast mineralized area not more than 6,000 square miles have been closely geologized and mapped. Of the geologized area not more than 2,000 square miles are exposed, and from that comparatively small territory upwards of $1,700,000,000.00 of gold, silver, copper, lead and zinc have been extracted.

Cropping veins in exposed areas were easily discovered, and while it is quite likely that some such veins remain undiscovered, they cannot be very plentiful. Hence that field which rewarded the old prospector so richly, though not entirely exhausted, is now quite limited. Other cropping veins were covered by rock slides, sand, gravel, soil, vegetation, forestation and the like. Such veins as were slightly covered were frequently discovered by keen tracing of float from river and creek beds up the hill and mountain side to their source, where by trenching, etc., many rich discoveries were made. Other scientific methods successfully employed were close study of formations, erosions, faultings, surrounding developments, and various other means.

It is generally accepted as a geological fact that by far the greater unexplored and unprospected areas are deeply covered by the erosions and volcanic overflows, etc., and undoubtedly conceal as many if not more rich and ever richer and larger veins and deposits of valuable gold, silver and base metals than have yet been discovered. Such conditions present a vast and wonderful though costly field for exploration and scientific prospecting by the use of geophysics and other means for which science is rapidly paving the way.

In the earlier days of mining in Colorado fortunes, both small and large, were made from shallow workings of veins containing high and medium grade ores.

When difficulties arose in the early days of mining which were costly to overcome, such as heavy water flows, the changing of ore from an oxide to a sulphide, or more powerful machinery was required to sink to greater depths, almost invariably the operator pocketed his fortune and quit to invest his earnings in farming or other inviting enterprises, which was quite the thing to do in those days. A large number of such mines have remained idle ever since—scores of them throughout the state. With the increase in the price of gold and silver they are attracting much attention, so that now we seem to be entering what may be termed the age of recovery of gold mines rather than a new age of prospecting. This was even true of many entire districts now classed as neglected districts.

The recovery, successful operation, and profitable production of a large number of mines in many of the neglected districts of the mining counties of Colorado during the last two years have proved beyond the shadow of a doubt what may be accomplished in other districts with similar undertakings.

Take Boulder County for example, with its many neglected districts looked upon with disdain by mining investors as a region of played-out mines which contained only knife-blade veins and small pockets.

As the prices of gold and silver began to advance in 1933 Boulder citizens, with unwavering faith in the mineral resources of their county, started a campaign of recovery with the following results: In 1933 it produced 4,404 ounces of refined gold valued at $112,528. In 1934 the number of ounces increased to 17,536, with a value of $612,900, an increase of more than 444 per cent, mostly from the recovery of old and long abandoned properties. Clear Creek County increased 200 per cent; Gilpin, 160 per cent; Eagle, Lake, Summit and others with corresponding increases, largely from revived mines. Park County more than doubled its production, while Teller increased from $2,808,236 to $4,471,849, a large percentage of which came from the resumption of properties many years idle.

The value of the production of these counties is given before in this article.

Three years ago hardly a soul could be found in the towns of either Summitville or Platoro. They were classified among "ghost towns."

The ores from the district had to be packed some ten miles on pack animals, loaded on old style wagons and hauled by mule teams forty miles or so to a railroad and from there freighted to Leadville, Salida, Pueblo or Denver for treatment. Not less than $50 a ton ore could be profitably shipped. Today modern roads have been built into this district; the mines can be reached with automobiles and trucks.

The Little Annie group has been equipped with a 150-ton mill and additional units are being added. There are 260 men employed in the mine, over sixty buildings have been constructed, the town is repopulated, a new schoolhouse has been built, with an enrollment of something like forty pupils; it is truly a rejuvenated mining camp of Colorado.

The Mammoth Mine, reported as having shipped years ago one-half million dollars' worth of gold and silver, has been taken over by eastern capital in the last three months.

A crew of experts has been engaged in its close examination and from the most reliable information that can be obtained it has thus far proved highly satisfactory. This vein is known to be over fifty feet wide at places and former geological reports state that samples taken from three to forty-two feet, excluding the rich ore encountered, gave an average return of $7.75 per ton under the old price of gold—under the new price of gold $12 to $15 per ton. This vein extends in a northwesterly direction through the Valley Queen and Congo groups for a known distance of over a mile and a half.

In the Valley Queen shaft at a distance of over 3,000 feet from the workings on the Mammoth group the vein has been opened up for a depth of over a hundred feet where it shows the same sized, high-grade streaks and general low grade average contained in the Mammoth.

There are many other well-known strong veins in the Platoro district worthy of serious consideration, among them the Forest King group, which parallels the Mammoth. A 1,200-foot tunnel driven on the vein has shown the minimum width is not less than twenty feet, with the same character and average values as the Mammoth. The Merrimac, Parole, Congress and Eureka groups are all of immense size and exceedingly good average values. The whole district is heavily mineralized and in all a most inviting field that threatens to rival in fame and production such mines as the Alaska Juneau, Treadwell and Homestake. Courageous development seems to be all that is necessary to bring about this most hopeful condition.

The western end of Larimer County extending from the foothills a few miles west of Fort Collins to the crest of the Medicine Bow range is another most inviting field that has never received the attention it deserves. Within that section some very promising discoveries have been made within the last year in the Manhattan, Masonville and other districts. It is the northeast terminus of the great mineral belt that sweeps through the state in a southwesterly direction to the San Juan and La Plata mountains in the southwestern part of the state.

Within that belt other well-known districts that come within the category of neglected fields and all deserving of serious attention and development may be mentioned. Among them are the Independence and Lincoln gulch in Pitkin County; the Red mountain district near the crest of the Continental divide in the western part of Chaffee County; the southern end of the Aspen belt in Gunnison County, embracing many well-known mining camps of early days; Montezuma in Summit County; the crest of the Mosquito range extending from the London Butte mine south for many miles. During the last year operations in the Jack lode at Weston pass and also at the Iron Chest at Trout Creek pass, good sized veins of the typical early days of Leadville carbonates were discovered. This field extends still farther south, embracing that vast area extending from Cripple Creek to Cotopaxi.

The Sangre de Cristo range, the Needle mountains in La Plata county, the Continental divide between San Juan, Ouray, and Hinsdale counties, the Carboniferous fields at State Bridge and many others of equal importance in Jackson, Routt, Moffat, Grand, and other counties in the trend of the great mineral belt mentioned, offer most inviting fields for the old prospector as well as for more recent scientific methods.

In a large number of mines in many of these neglected districts enormous veins and deposits of low and medium grade ore, and some high grade, were discovered in the earlier days. They could not operate profitably because of remoteness and isolation by rugged, mountainous conditions and antiquated means of transportation. The building of good roads and the construction of the Dotsero cutoff have made them accessible and easily tributary to modern reduction plants if and when constructed at nearby central points.

We need such plants employing up-to-date metallurgical processes. The federal government should finance them under some one of their alphabetical plans.

That would be great, but they won't. The "big guns" at Washington seem to be shy of mining; they think it is too risky, too much of a gamble. As a matter of fact it is neither one nor the other. Cecil Rhodes definitely proved that. It opens up a great industrial field for safe investments.

Under present antiquated smelting conditions in Colorado ores of mines remote from smelting points must run better than $20 or there is no profit in it for the producer.

Over in Utah several modern marketing reduction plants are treating thousands of tons daily of ores averaging as low as $10 per ton in the five metals mentioned, at a profit. The primary thing at the present time is putting men back to work.

High-grade ore doesn't mean much in that particular, it pays so well that the owners make plenty by operating it themselves or by employing only a few miners. Low and medium grade mines must produce large tonnage to operate profitably, and must therefore be worked on a large scale, as they would be if there were plants to convert their ores into salable metals. This would give jobs to multifold thousands in the mining, milling, smelting and contributary industries.

MISCELLANEOUS METALS

Molybdenum

The largest known molybdenum mine in the world is located at Climax, Colorado, and is being operated by the Climax-Molybdenum Company. During 1935 the reported production was 10,168,635 pounds of 100% molybdenum.

Tungsten

The largest and most productive mines are at Nederland in Boulder County. The reported production of tungsten in this county for 1935 was $207,282.96.

Manganese

Manganese is found in large quantities in a great many mining counties in the state. In 1935 the reported production of manganese from Saguache County was $8,300.00.

Radium, Uranium, Vanadium

The most extensive field for these metals is near Naturita, in the western part of Montrose County. In 1935 the reported production of vanadium was $27,000.00, and uranium $1,450.00.

Nonmetallics

Building and monumental stone, such as granite, marble, onyx, etc., can be supplied from vast stores of this material, in various parts of the state. Quarries supplying these stones are located in Chaffee, Gunnison and other counties of the western slope. Building sands and gravels are found in abundance along all rivers and streams.

The clay deposits of Colorado are unexcelled. Beryl, feldspar, fluorspar, bentonite, limestone, sandstone, gypsum, and many other materials, are found in large quantities. Enormous oil shale deposits exist in several of the western counties. Mica, jefferisite and other insulating materials are widely distributed in Colorado.

Operating Mines and Employment

The number of working lode mines, upon which reports were filed in the State Bureau of Mines for 1935 was 713. A great many additional properties produced amounts varying from $100.00 to $2,000.00 from intermittent operations.

In 1913 the number of men employed in and about mines in the state of Colorado was in round numbers 24,000; in 1932 not over 4,000 men were so employed, a decline of 83% during that period. During the same period the decline of employment in Idaho was only 31% and in Utah about 42%. The difference between these percentages is strongly indicative that the lack of smelting and large reduction plants was the principal cause for the excessive decline of mining in Colorado, as compared with other states.

Because of the number of small operations in both lode and placer mines, it is impossible to get the exact number of men employed in 1935, but an estimate of 13,470 would be most conservative.

Acknowledgment

Thanks are due to John W. Finch, director, and C. W. Henderson, engineer, the United States Bureau of Mines, for the production statistics regarding the common metals.

CONDENSED REVIEW OF MINING DISTRICTS BY THE FIELD INSPECTORS FOR 1935

DISTRICT No. 1 by George Becker

During the year 1935, the mining activities continued to increase on an encouraging trend in both placer and lode mining and, with the present price of metals, the future looks good. There was greater activity in the higher mountains than for a number of years past, and approximately 100 properties operated at an altitude above 12,000 feet. These properties could only be reached by jack trails. These scenes brought back reminiscences of the early pioneer prospector and miner. Including the above 100 properties mentioned, there were 400 inspections made and 340 reports filed, and a total of 5,700 men were employed on these operations. This total is based on the number of men employed at the time of the inspection, and does not include a number of men engaged in working and developing their own claims, both placer and lode mines. Comparing the above figures with the activities of the preceding year, it shows an increase of 20% in the number of men employed. At this time definite figures are not available on production, but it is estimated that production will show a corresponding increase.

New mills constructed and placed in operation during the year in this district: Santiago at Georgetown; Odell at Empire; Alice at Idaho Springs; Bruce at Idaho Springs; Anchor at Russell Gulch; Richmond at Boulder; Wano at Jamestown; Boyle Custom Tungsten Mill at Boulder.

New mills under construction in this district this year: Carbonate at Breckenridge; London Butte at Alma; Hock Hocking at Alma; Black Eagle at Idaho Springs; Ruth Custom Mill at Idaho Springs; United Mines at Boulder; Nederland Custom Mill at Nederland; Golden Gilpin Custom Mill at Blackhawk; also two aerial wire rope trams exceeding 4,000 feet in length, and a Wile Electric Smelter at Montezuma.

Old mills operated in this district during the past year: Argo Custom Mill at Idaho Springs; Clear Creek Gilpin Custom Mill connected with sampler at Idaho Springs; Mattie at Idaho Springs; Alma Lincoln at Idaho Springs; Watrous at Silver Plume; Lombard at Idaho Springs; Chain O' Mines at Central City; Pittsburgh at Central City; War Dance Custom and Private Mill at Blackhawk; Farr Custom Mill at Blackhawk; Rochester at Blackhawk; Gold Dirt at Empire; Wolf Tongue Custom Mill at Nederland; Clark Tungsten Custom Mill at Nederland; Black Swan at Salina; Emancipation at Salina; Wood Mountain at Wallstreet; Nancy at Wallstreet; Big Five at Ward; Strong at Ward; Saint Joe at Gold Hill; Slide at Gold Hill; Vickery

Custom Mill at Jamestown; London at Alma; North London at Alma; American at Alma; London Mountain at Alma; Homestake at Alma; Paris at Alma; Magnolia at Alma.

The mills mentioned do not include a number of pilot mills that were operated in different parts of this district to determine the value and the best method for treating their kind of ore. There were also a number of small five and ten stamp mills operated in different parts of this district by prospectors with good results.

Judging from the available tonnage that is being produced, of both concentrates and crude ore, the Front Range section of this district is very much in need of a modern reduction and smelting plant located at a suitable point to best serve the whole district.

From the present new activities and the continuous inquiries for metal mines, the new organizations under way and those that are just getting started, it would seem that the coming year will show a material increase in production and employment.

DISTRICT No. 2 by Herrick McLeod

The Golden Cycle Mill at Colorado Springs treated 502,142 tons of ore in 1935. The gross value was $5,691,528. Cripple Creek District mines produced 444,434 tons of the ore treated by this mill. The total production of these mines in 1935 was over 450,000 tons, with a gross value of about $4,500,000. This was remarkable in view of the fact that a number of the mines were off the shipping list for the last six months of the year, awaiting completion of the new Cripple Creek mill, on Globe Hill.

The new mill is owned and operated by the Cripple Creek Milling Company, Judge James Owen of Denver, President, J. R. Fife of Cripple Creek, General Superintendent. The Cripple Creek mill has a daily capacity of 500 tons. It is now running steadily on ore from the Stratton Cripple Creek M. and D. Co. mines, and from the Strong, Queen, and other mines.

Tom Kavanaugh has operated his 100-ton cyanide mill, on Ironclad Hill, continuously during the year, on his own ore.

The Cresson mine produced 131,389 tons, which had a gross value of $1,190,438.60. Development work during the year amounted to 12,445 feet. The tonnage of ore broken and ready to be pulled was greater at the end than at the beginning of the year. The net gain from operation in 1935 was $134,649.67.

The United Gold Mines Group produced 117,814 tons, with a gross value of $1,370,778.30. Development work amounted to 21,072 feet. Net gain from operation was $66,138.

A greater amount of development work is being done than for years past. In the Ajax, a winze has been sunk below the twenty-first level to a depth of 240 feet, and cross-cuts are being driven to the Mohican and New Market veins, which have made large production on levels above. The water is raised 400 feet to the level of the lateral leading to the Roosevelt Deep Drainage Tunnel. In the Vindicator, a cross-cut is being driven on the twenty-first level to cut the La Bella, Carr, and Ready Money veins. The water is raised 100 feet, and flows through the twentieth level to a connection with the drainage tunnel. The Cameron shaft has been sunk a lift of 100 feet to a depth of 868 feet from surface. A cross-cut, at a depth of 850 feet, has been driven to the Mitchell vein, where the ore body is larger and richer than on levels above. A recent shipment gave returns of over $50 per ton for coarse rock, and over $100 per ton for screenings. The Ada Bell shaft is being sunk a lift of 200 feet to a level 500 feet below surface. At the 300-foot level a large body of ore was found about 800 feet southeast of the shaft. The Abe Lincoln shaft will be sunk a lift of 200 feet, according to the terms of a lease recently granted by the Stratton Cripple Creek M. and D. Co. The present depth is 800 feet. The John A. Logan is making a good production from the first, second, eighth, and ninth levels, and the American Eagles from the nineteenth level. Development work which promises good results is being done on the sixth level of the El Paso, and on the twelfth level of the Strong. Of the many smaller operations, one example is given to show the grade of ore still found in the mines of Teller County. From the Specimen, one of the Stratton Cripple Creek M. and D. Co. mines, shipments are made regularly which give returns of over $80 per ton for screenings, and over $15 per ton for coarse rock and middlings.

Many new mine buildings and headframes have been erected during the year. Many new compressors have been installed. Makeshift hoists have been replaced by real hoists.

The Golden Cycle Corporation has acquired title to 250 acres on Battle Mountain (known as the Ajax property), to the Sunshine-Sedan Group near Cameron, and to the Anchoria Leland property, on Gold Hill. The Cresson Cons. G. M. and M. Co. has completed the purchase of the Gold Sovereign property. The Blue Bell group has been purchased by the Triad Gold Mining Co., the Rubie mine by R. A. Dooley and associates, and the Pinnacle property by Cameron Gold Mines, Inc.

Custer County—Work was done in 1935 in the Vulcan Tunnel, and in the King of the Carbonates, Passiflora, Deceiver, Denver, Sulphide, and other claims. A hoisting plant and compressor was installed on the Sulphide claim. Shipments of silver-lead ore were made to the Golden Cycle mill and to the Leadville smelter.

Douglas County—An increased production of limestone, fire clay, plastic clay, and silica sand is reported.

El Paso County—In addition to the operation of the Golden Cycle mill, this county should be credited with operations in three limestone quarries, a lime burning plant, a granite polishing plant, and a stone quarry. A large tonnage of limestone was produced. The lime burning plant, near Manitou Springs, was operated by the Thomas and Brown Lime Company, of Pueblo. The lime made in this plant is used in the Golden Cycle mill, and in the Cripple Creek mill. The Manitou Greenstone quarry is filling an order for five carloads of ornamental stone to be shipped to Beaumont, Texas.

Fremont County—The quarries and mines of Fremont County produced 4,000 tons of gypsum, 17,000 tons of feldspar, over 100,000 tons of limestone and lime shale, and many tons of fire clay, mica, and granite. The V. D. Coleman Granite Works made a recent shipment of dark gray Colorado granite from a new quarry in Fremont County, to the Boulder Dam, to be used as the base course of the elevator and utility building towers. The stone was cut to specifications, and polished in the V. D. Coleman Granite Works plant, in Colorado Springs. The Colorado Portland Cement Plant and the Diamond Fire Brick Co. plant report improved business.

Pueblo County—Two large brick plants, a clay grinding plant, a mica grinding plant, a lime burning plant, two fire clay calcining plants, two fire clay mines, a gypsum quarry, and a lime quarry operated in 1935.

The brick and tile plants in La Junta and Trinidad report better business. The La Junta Clay Products, Inc., is making a beautiful ornamental brick with buff shale, which is found a few miles north of La Junta. The post office building in La Junta, and a school building in Manzanola are faced with this brick.

Approximately 4,000 men are employed in District No. 2, in mining, milling, and other operations, which are under the jurisdiction of the State Bureau of Mines.

DISTRICT No. 3 by R. J. Murray

The tonnage output throughout this district for the past year shows a very marked increase over that of the past several years. Better prices for gold, silver, lead, zinc and other metals reflected in the large tonnage and financial gains made during the year 1935.

Chaffee County—The Burleson Lease on the Mary Murphy has shipped a considerable tonnage of sulphide and oxide ores with gold, silver and lead content. Several small operators in this section are also shipping their quota of ores. Probably thirty men are employed in this district. North of Buena Vista to the county line at Granite has been the scene of more activity in mining than has taken place for a number of years. While the tonnage is not large, the development and prospect work being done will result in further development in this mineralized area. The Iron Chest Mine on Trout Creek Pass, which, during the year, opened ores through diamond drilling, is working towards the opening and mining of this find. The different granite quarries are producing a fairly large amount of stone and are finding a ready market for same. The fluorspar properties are shipping to various parts of this country. The Turret district is again being reopened and is putting new life into this section. The C. F. & I. quarry at Monarch has, for a large part of the year, been sending 1,000 to 1,500 tons daily to the Pueblo plant. Approximately 200 men are employed in mining, quarrying and placer work in this county.

Conejos County—The Mammoth Tunnel at Platoro is being reopened after 38 years of inactivity. The tunnel on the vein is being retimbered, and a shaft on this property will be unwatered during the coming summer. Several companies have leases and options on a large acreage of ground in this camp. Activities will be pushed forward early in 1936.

A new government-built auto road to this camp has been completed within the past month, and will, no doubt, add impetus to this long deserted mining camp. Twenty to thirty men are employed in this district.

Costilla County—The Grayback district has been the scene of considerable mining activity during the year. The prospect work done has shown some very promising results. Placer work in this section was more or less hampered by a shortage of water. However, it is said that some active placer operations are considered for the coming year. 25 to 50 men are employed in the Grayback, Willow and Buckskin sections.

Eagle County—The Empire Zinc Mines, probably the largest producer of complex ores in this state, has, for the past year, been shipping 1200 tons daily of crude ores. Their mill has been inactive for several years. Numerous small operations are working in Belden Canon and are producing ores with a very high gold content. Some work has been done in the Fulford district during the past year. 625 men are employed in mining in this county as a whole.

Garfield County—Considerable limerock has been shipped from the Holly Sugar Company's quarry at Glenwood Springs through 1935. Some prospect work has been done in the vanadium sandstones west of Newcastle. 50 men have been employed in this county.

Gunnison County—The Marble Company at Marble, Colorado, has increased their force of men, and are preparing to send out considerable marble. A few small lots of ore have been sent out from the Crystal district with probably 15 men working. 125 to 150 men are employed at the Marble Company operations.

Lake County—''Keeping your head above water'' applies to Leadville, where the large tonnage of ores now being mined are above the water basins, while hundreds of thousands of tons of commercial ores are under several hundred feet of water, which, if drained by tunnel, would be a source of supply for the Arkansas Valley farmers, the large flow of water being continuous and not affected by dry seasons. The Climax Molybdenum mine, the world's largest producer of molybdenum ores, has been milling approximately 5,000 tons of ore daily for the past year.

The largest classifiers ever made, and also a crushing plant rated as one of the most modern in this country, can be seen at this property. Twenty new homes for employees have been built during the year at a cost of $150,000.00. The mills are being enlarged and new equipment is being put in place to greatly increase the tonnage for the coming year. Space will permit giving only a slight idea of the immensity of this operation. The R. J. Bryant Mill at the Yak Tunnel, 75-ton capacity, is operating successfully on custom ores from several mines. The Leadville Metals Milling Company's mill has been remodeled, and a cyanide unit added thereto. The mill has a daily capacity of 450 tons, and will run only Ibex ores for a time at least. Three other mills are being talked of and will probably be erected during the coming summer. The Ibex, Venir, Garbutt, Resurrection, Dolly B. and numerous other small mines are contributing to the tonnage coming from the Leadville district. Approximately 1100 men are employed in the mines, mills, smelter and placer operations in this county.

Mineral County—The Wilson Lease, successors to the Withrow Lease, on the Commodore Mine, are sending out a fair tonnage of high grade silver ores, together with pushing forward a new campaign of development and prospect work with an increased force of men. The Amethyst, a consistent producer of high grade silver ore; the Last Chance, New York, Pittsburgh and others are contributing towards the number of men employed and the tonnage of ores produced in this camp. The Fluorspar mine and mill at Wagon Wheel Gap are running up to capacity, all concentrates going to the C. F. & I. plant at Pueblo. Thirty-five men are employed at this mine. A much talked of venture at Creede is the new 75-ton flotation mill, now under construction by the Creede Milling Syndicate to operate on Commodore ores. One hundred men are employed in Creede mines and mill.

Pitkin County—While not producing a large tonnage, the Midnight mine is working a fair force of men, and also the combined Hyman and Brown properties, the Highland, Hope, Slide and Porphyry Mountain Tunnels. 100 men are employed in these mines, together with approximately 75 men employed in the No. 2 water diversion tunnel located in this county.

Rio Grande County—The Summitville Consolidated Mines., Inc., is the outstanding mining operation in this section. The flotation and cyanide mill has, through new mill installation, been increased from 150 tons daily capacity to 300 tons daily. Nearly 100 new buildings have been erected at these mines. Among them are school house, post office, administration building, bunk and boarding houses, cottages and many others which space forbids mentioning. Approximately 300 men are employed at this camp. Small operations on prospect work are being carried on at Stunner and Jasper with 12 to 15 men employed.

Saguache County—In the Crestone district the Luis Marie Baca Mining and Development Company, holders of a long-time lease on the entire holdings of the Land Grant Company on the Sangre de Cristo Range, is operating on the Independence and a number of other properties controlled by the company. Their 35-ton mill, erected last year, is running on ores from the various operations, and also on ores mined through subleasers. It is probable that the mill will be enlarged this year to handle the increased tonnage mined. A new company is operating on the Triple T Mine at Crestone. Two or three small operators are shipping high grade silver ore in small lots from the Rawley district. Fifty-five to 60 men are employed in this county in mining.

DISTRICT No. 4 by Dan C. McNaughton

(The State Bureau of Mines was saddened by the death of John F. Clougher, inspector for District No. 4, who passed away November 27th, at Denver. Mr. Clougher served the department efficiently for eight years. He has been succeeded by Hon. Dan C. McNaughton as inspector for this district, who is the author of the following article.)

Owing to the fact that I have just assumed my duties in this district I must depend largely on the files in the office of the State Bureau of Mines in Denver to supplement what I have been able to gather in a short time.

There has been a noticeable increase in the exploration of gold bearing veins and the development of ore deposits of promise in the San Juan District this year.

As evidence of the marked increase in the industry, there are approximately 1200 men employed.

Although several of the large mines of the district, having large bodies of zinc-lead ores, have been idle for some time due to the low prices of such metals, the mines in the different counties comprising this district having aerial tramways, or situated in proximity to railroads or highways, having ores with gold and silver values, were active during the year.

A summary of activities throughout this district is as follows:

Dolores County—Activities this year consisted of the operation of lode mines and several small-scale placer operations. The Pro Patria mine ranked highest in the number of men employed and in ore production.

Gunnison County—Thirteen lode mines were in active operation during the present year. In addition to these several smaller operations were being carried on. Milling operations were conducted by the Carter Mines Company and the Lucky Boy.

Hinsdale County—Two large lode mines and several small properties operated in this county. Milling operations were conducted on the Fanny Fern property.

La Plata County—Major operations were conducted on nine lode mines and numerous minor-scale operations by owners of lode and placer claims and by lessees. Milling operations were conducted at the May Day and Gold King properties. A 25-ton mill has just been erected on the Idaho property.

Montezuma County—Three lode mines have been in active operation during the year, and several small-scale placer operations have been conducted on the East Mancos river. Also a number of prospectors explored and staked claims in the mineralized areas. The Hesperus Mining Company has just completed an 85-ton mill.

Montrose County—In September 99,000 pounds of vanadium ore were shipped from this county. The general outlook for the district is very encouraging.

Ouray County—Eleven lode mines were in active operation during the present year, with the Camp Bird leading in the number of men employed and in ore production. Milling operations were conducted at the Camp Bird and Pony Express properties.

San Juan County—Active operations were conducted on sixteen lode mines during the year, with the Shenandoah-Dives mine leading all others in the number of men employed in mining and milling, said property having milled over 1,000,000 tons of ore during 1935. In addition to the ore from their mine, custom ore has also been milled. This company is in a position to maintain a 600-ton basis irrespective of outside tonnage. The Pride of the West milled approximately 6000 tons.

San Miguel County—Eight lode mines and four placer mining operations were carried on during 1935. Milling operations were conducted by the San Juan Metals Company and the Telluride Mining and Milling Company.

Improvements Made, Mine and Mill Machinery and Equipment Provided on mining properties throughout this district in 1935 are as follows: The Carter Mill in Gunnison County was partially remodeled and new equipment was added. New mill machinery and equipment for the Lucky Boy Group were also installed. In Hinsdale County new buildings were erected at the Fanny Fern mine and new machinery and equipment were installed. In Ouray County a new boarding house and an office building were erected at the Camp Bird mine. A new mill was built at the Ida L. property. New equipment for both mine and mill was provided on the Old Hundred property in San Juan County. The mill has a 200-ton capacity. A 1200-foot aerial tramway was also built, as well as a tailings disposal plant. New equipment for the Savage mill in San Miguel County was secured for the 4-ton mill. A new boarding house was erected on the Dividend group.

The preceding does not include scores of individual owners of claims performing work on their properties or the many prospectors diligently searching for ore bodies with gold and silver values.

HISTORICAL NOTE

The Bureau of Mines of the State of Colorado was established by an act of the Tenth General Assembly, approved March 30, 1895. This act repealed a previous act creating an "Inspector of Metalliferous Mines," which was passed in 1889. The Bureau of Mines law established the office of Commissioner of Mines, provided for in the State Constitution, and charged him, among other things, with the supervision of metal mine inspection and the enforcement of laws relating to safety and health in metal mines. Subsequently this was broadened to include "any ore mill, sampling works, smelter, metallurgical plant, rock quarry, clay pit, railroad tunnel, rock excavation or mine of whatsoever kind or character, except coal mines." The Commissioner of Mines was also charged, "as he has opportunity and means," to collect mineral specimens and exhibit the same, to collect books relating to mining and geology, to collect and preserve data regarding mining methods, mining costs, milling, metallurgy, geology, mineral deposits of all kinds, and so on. Aside from the purchase of the Elsner collection of minerals, very little "opportunity and means" has been granted to the Commissioners for anything except inspection work. The present activities of the Bureau of Mines are treated elsewhere in this report.

COMMISSIONERS OF MINES

Harry A. Lee	May 11, 1895-May 10, 1903
E. L. White	May 10, 1903-May 10, 1907
T. J. Dalzell	May 10, 1907-May 10, 1911
T. R. Henahen	May 10, 1911-May 10, 1915
Fred Carroll	May 10, 1915-June 1, 1919
Horace F. Lunt	June 1, 1919-June 1, 1923
John T. Joyce	June 1, 1923-June 1, 1927
John T. Joyce	June 1, 1927-June 1, 1931
John T. Joyce	June 1, 1931-June 1, 1935
John T. Joyce	June 1, 1935-

PUBLICATIONS OF THE BUREAU OF MINES

BULLETINS

Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.

Bulletin No. 2, Precious Metal Production for the year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 4, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1901.

Bulletin No. 5, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1902.

Bulletin No. 6, Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines, 1906.

Bulletin No. 7, Federal and State Laws Relating to Mining, Fred Carroll, Commissioner of Mines, 1916.

Supplement to Bulletin No. 7, Mining Laws Enacted by the Twenty-first General Assembly, Fred Carroll, Commissioner of Mines, 1917.

Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-second General Assembly, Horace F. Lunt, Commissioner of Mines, 1919.

Supplement No. 3 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-third General Assembly, Horace F. Lunt, Commissioner of Mines, 1921.

Supplement No. 4 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.

Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.

Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920. Out of print, now embraced in Bulletin No. 11.

Bulletin No. 11, Federal and State Laws Relating to Mining, John T. Joyce, Commissioner of Mines, 1931.

REPORTS

Report of Bureau of Mines, Colorado, from its establishment in May 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines, 1896.

Report for the Year 1897, Harry A. Lee, Commissioner of Mines, 1898.

Report for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Biennial Report for the Years 1899-1900, Harry A. Lee, Commissioner of Mines, 1900.

Biennial Report for the Years 1901-1902, Harry A. Lee, Commissioner of Mines, 1903.

Biennial Report for the Years 1903-1904, E. L. White, Commissioner of Mines, 1905.

Biennial Report for the Years 1905-1906, E. L. White, Commissioner of Mines, 1907.

Biennial Report for the Years 1907-1908, T. J. Dalzell, Commissioner of Mines, 1909.

Biennial Report for the Years 1909-1910, T. J. Dalzell, Commissioner of Mines, 1911.

Biennial Report for the Years 1911-1912, T. R. Henahen, Commissioner of Mines, 1913.

Biennial Report for the Years 1913-1914, T. R. Henahen, Commissioner of Mines, 1914.

Biennial Report for the Years 1915-1916, Fred Carroll, Commissioner of Mines, 1916.

Biennial Report for the Years 1917-1918, Fred Carroll, Commissioner of Mines, 1919.

Annual Report for the Year 1919, Horace F. Lunt, Commissioner of Mines, 1920.

Annual Report for the Year 1920, Horace F. Lunt, Commissioner of Mines, 1921.

Annual Report for the Year 1921, Horace F. Lunt, Commissioner of Mines, 1922.

Annual Report for the Year 1922, Horace F. Lunt, Commissioner of Mines, 1923.

Annual Report for the Year 1923, John T. Joyce, Commissioner of Mines, 1924.

Annual Report for the Year 1924, John T. Joyce, Commissioner of Mines, 1925.

Annual Report for the Year 1925 was fully prepared but because of lack of funds was not printed. The manuscript is on file in the office of the State Bureau of Mines.

Annual Report for the Year 1926, John T. Joyce, Commissioner of Mines, 1927.

Annual Report for the Year 1927, John T. Joyce, Commissioner of Mines, 1928.

Annual Report for the Year 1928, John T. Joyce, Commissioner of Mines, 1929.

Annual Report for the Year 1929, John T. Joyce, Commissioner of Mines, 1930.

Annual Report for the Year 1930, John T. Joyce, Commissioner of Mines, 1931.

Annual Report for the Year 1931, John T. Joyce, Commissioner of Mines, 1932.

Annual Report for the year 1932, John T. Joyce, Commissioner of Mines 1933.

Annual Report for the Year 1933, John T. Joyce, Commissioner of Mines, 1934.

Annual Report for the Year 1934, John T. Joyce, Commissioner of Mines, 1935.

At the time this report goes to press, there are available for distribution copies of the Annual Reports for 1921, 1922, 1926, 1928, 1932 and 1934. The 1929, 1930, 1931 and 1933 Annual Reports are out of print. The price of Bulletin 11, "Mining Laws of Colorado," is 50 cents; all other available publications are free. The publications not mentioned in this paragraph are exhausted, but copies may be consulted in many of the public, state and college libraries throughout the country.

Note—The Colorado Geological Survey has published a number of geological reports and maps, a list of which may be obtained from the head of the Geology Department of the University of Colorado, Boulder, Colorado.

TABLE I

PRODUCTION OF THE PRINCIPAL METALS IN COLORADO IN 1934 AND 1935

	GOLD				SILVER				COPPER				LEAD				ZINC				TOTAL VALUE		Increase or Decrease In	
	1934		1935		1934		1935		1934		1935		1934		1935		1934		1935					
County	Fine Ounces	Value	Fine Ounces	Value	Fine Ounces	Value	Fine Ounces	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	1934	[3]1935	Value	County
Adams	19.64	$ 683	40	$ 1,400	2	$ 1	6	$ 4	....	....	....	....	....	....	....	....	....	....	....	....	$ 684	$ 1,404	+ $ 720	Adams
Alamosa	4.35	152	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	162	....	— 152	Alamosa
Arapahoe	59.57	2,082	53	1,855	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,083	1,855	— 228	Arapahoe
Boulder	17,536.48	612,900	22,002	770,070	57,171	36,959	34,394	25,383	21,400	$ 1,712	25,000	$ 2,100	69,000	$ 2,553	60,000	$ 2,000	....	....	....	....	654,124	799,553	+ 145,429	Boulder
Chaffee	1,597.94	66,848	1,703	59,605	7,886	5,098	9,031	6,665	2,700	216	7,000	588	80,000	2,960	110,000	4,400	....	....	18,000	$ 828	64,122	72,086	+ 7,964	Chaffee
Clear Creek	11,901.23	415,948	16,850	589,750	97,444	62,994	112,112	82,739	77,500	6,200	139,000	11,676	455,000	16,835	657,000	26,280	....	....	....	....	501,977	710,445	+ 208,468	Clear Creek
Costilla	8.70	304	1	35	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	304	35	— 269	Costilla
Custer	19.14	669	2	70	4,571	2,955	7,647	5,643	1,300	104	4,000	336	23,000	851	34,000	1,360	....	....	....	....	4,579	7,409	+ 2,830	Custer
Delta	31.96	1,117	1	35	5	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,120	35	— 1,085	Delta
Denver	124.29	4,344	42	1,470	4	3	1	1	....	....	....	....	....	....	....	....	....	....	....	....	4,347	1,471	— 2,876	Denver
Dolores	351.56	12,287	481	16,835	49,302	31,872	62,588	46,190	19,800	1,684	17,000	1,428	239,000	8,843	238,000	9,520	214,000	$ 9,202	145,000	6,670	63,788	80,643	+ 16,866	Dolores
Douglas	104.26	3,644	83	2,905	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3,644	2,905	— 739	Douglas
Eagle	6,967.64	243,619	10,035	351,225	1,942,284	1,255,618	2,766,556	2,041,718	9,819,000	785,520	12,822,000	1,077,048	104,400	3,863	216,000	8,640	....	....	....	....	2,288,620	3,478,631	+ 1,190,111	Eagle
Elbert	9.90	346	8	280	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	346	280	— 66	Elbert
Fremont	60.77	2,124	66	2,310	12	8	8	6	....	....	....	....	....	....	....	....	....	....	....	....	2,132	2,316	+ 184	Fremont
Gilpin	7,748.41	270,807	19,736	690,760	35,080	22,678	63,635	46,963	32,600	2,608	54,000	4,636	165,000	6,105	144,000	5,760	....	....	....	....	302,198	748,019	+ 445,821	Gilpin
Grand	11.59	405	1	35	427	276	....	....	....	....	....	....	....	....	....	....	....	....	....	....	681	35	— 646	Grand
Gunnison	2,642.69	92,362	1,762	61,670	10,641	6,879	7,311	5,396	500	40	2,000	168	68,000	2,146	71,000	2,840	33,000	1,419	2,000	92	102,846	70,166	— 32,680	Gunnison
Hinsdale	0.23	8	79	2,765	677	373	860	635	....	....	....	....	500	18	2,000	80	....	....	....	....	399	3,480	+ 3,081	Hinsdale
Huerfano	2.72	95	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	95	....	— 95	Huerfano
Jackson	9.33	326	13	455	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	326	456	+ 130	Jackson
Jefferson	2,662.12	89,646	4,692	160,720	388	251	610	450	....	....	....	....	....	....	....	....	....	....	....	....	89,797	161,170	+ 71,373	Jefferson
Lake	15,173.19	530,303	16,438	540,330	86,738	56,073	112,846	83,280	90,400	7,232	73,000	6,132	1,049,500	38,832	2,410,000	96,400	1,029,000	44,247	1,507,000	73,922	576,687	800,064	+ 123,377	Lake
La Plata	2,637.11	88,672	2,112	73,920	16,748	10,827	17,643	13,021	....	....	....	....	7,900	292	24,000	950	....	....	....	....	99,791	87,901	— 11,890	La Plata
Larimer	42.86	1,498	70	2,450	1,239	801	76	56	....	....	....	....	....	....	....	....	....	....	....	....	2,299	2,506	+ 207	Larimer
Las Animas	....	....	....	....	48	31	....	....	....	....	....	....	700	26	....	....	....	....	....	....	57	....	— 67	Las Animas
Mesa	16.02	525	17	695	164	106	4	3	5,000	400	....	....	....	....	....	....	....	....	....	....	1,031	598	— 433	Mesa
Mineral	55.00	1,922	31	1,086	479,890	310,232	476,977	352,009	....	....	....	....	176,900	6,545	324,000	12,960	....	....	....	....	318,699	366,054	+ 47,355	Mineral
Moffat	68.67	2,400	142	4,970	4	3	60	44	....	....	8,000	672	....	....	....	....	....	....	....	....	2,403	5,686	+ 3,283	Moffat
Montezuma	791.76	27,672	22	770	775	501	816	602	600	48	....	....	....	....	1,000	40	....	....	....	....	28,221	1,412	— 26,809	Montezuma
Montrose	246.35	8,610	367	12,846	78	50	91	67	....	....	....	....	....	....	....	....	....	....	....	....	8,660	12,912	+ 4,252	Montrose
Ouray	8,159.17	285,163	12,357	432,495	109,853	71,016	224,039	165,341	211,700	16,936	300,000	25,200	431,000	16,947	821,000	32,840	....	....	27,000	1,242	389,062	657,118	+ 268,056	Ouray
Park	85,867.64	3,001,074	73,234	2,563,190	61,510	39,764	57,241	42,244	72,100	5,768	106,000	8,904	2,625,800	97,165	1,886,000	75,440	....	....	....	....	3,143,761	2,689,778	— 453,983	Park
Pitkin	13.90	486	15	625	121,105	78,290	192,799	142,286	900	72	....	....	411,000	15,207	461,000	18,440	233,000	10,019	225,000	10,350	104,074	171,601	+ 67,627	Pitkin
Rio Grande	1,201.06	41,977	7,985	279,510	2,393	1,547	11,684	8,623	6,000	480	33,000	2,772	....	....	....	....	....	....	....	....	44,004	290,905	+ 246,901	Rio Grande
Routt	48.87	1,708	21	735	99	64	10	7	....	....	....	....	....	....	....	....	....	....	....	....	1,772	742	— 1,030	Routt
Saguache	49.60	1,730	528	18,480	215	139	4,107	3,031	300	24	15,000	1,260	2,000	74	55,000	2,200	....	....	....	....	1,967	24,971	+ 23,004	Saguache
San Juan	16,691.99	579,890	15,337	536,795	303,012	195,887	251,656	185,722	819,300	65,544	611,000	51,324	2,051,000	75,887	2,337,000	93,480	2,000	86	....	....	917,294	867,321	— 49,973	San Juan
San Miguel	6,272.99	219,241	12,241	428,435	66,938	43,273	167,707	123,768	112,200	8,976	117,000	9,828	393,000	14,641	813,000	32,520	33,000	1,419	3,000	138	287,450	594,689	+ 307,239	San Miguel
Summit	8,063.92	281,834	6,777	202,195	6,500	4,202	9,922	7,322	700	56	6,000	504	92,300	3,415	84,000	3,360	....	....	....	....	289,507	213,381	— 76,126	Summit
Teller	127,949.90	4,471,849	128,102	4,483,670	12,656	8,117	13,407	9,894	....	....	....	....	....	....	....	....	....	....	....	....	4,479,966	4,493,464	+ 13,498	Teller
Total	324,923.32	$11,366,070	361,347	$12,297,145	3,475,661	$2,246,892	4,605,845	$3,399,114	11,294,000	$ 903,620	14,339,000	$1,204,476	8,435,000	$ 312,095	10,738,000	$429,620	1,544,000	$ 66,392	2,027,000	$ 93,242	[2]$14,884,969	[1]$17,423,497		

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[1] Average value of metals: Gold, $35.00 per fine ounce; silver, $0.738 per fine ounce; copper, $0.084 per pound; lead, $0.04 per pound; zinc, $0.046 per pound.
[2] Average value of metals: Gold, $34.96 per fine ounce; silver, $0.64646464+ per fine ounce; copper, $0.080 per pound; lead, $0.037 per pound; zinc, $0.043 per pound.
[3] Actual 11 months figures, with estimate for December.

THE VALUE OF STATE INSPECTION IN LESSENING MINE ACCIDENTS

(Attention—Mine Operators)

In my report of 1934 I called attention to the fact that the State of Colorado had the highest average in the years 1931 and 1932 in mine accidents of any state in the union. Taking fatalities in each 100,000 shifts as the basis on which to compute ratios, assuming that both slight and serious injuries would hold in about the same proportion, the fatalities of 1934 exceeded the fatalities of 1933 by 5, but the increase in the number of shifts being slight the ratio was considerably increased for that year.

In 1935 the fatalities were 21 as compared to 17 in 1934, but while there was quite a heavy increase in the number of shifts worked in 1935 over 1934, the ratio of fatalities in every 100,000 shifts was only slightly increased.

By referring to the summary at the end of this article giving the ratio of fatalities for each 100,000 shifts by eight year periods, beginning with 1906, it will be observed that the ratio for the past five years of the present eight-year period has increased during the past year from .927 in 1934 to .954 in 1935.

Though the increase last mentioned was slight, it is still deplorable. We are striving hard, using every known means through the inspection department of the Bureau of Mines, to reduce accidents and the only way by which we can accomplish that end is through a hearty and a determined cooperation of the mine operators of the state, both large and small. In the majority of cases it is gratifying to know that we have such cooperation. Nevertheless carelessness in the management and operation of some mines is painfully obvious. In justice to the careful operator, I wish to reiterate what I wrote years ago, that some legislative step should be taken to levy a just penalty upon the careless operator for the relief and protection of careful management and mines that have furnished every possible safety device. It is neither right nor just that the careful operator should be penalized for the laxity and omissions of the careless, especially where the latter declines to carry out the orders of the Commissioner or Inspectors to remedy defective, dangerous conditions and practices in the operation of his mine, but on the other hand treats them with utter disregard.

In order to bring about a decrease in mine accidents, this department must insist upon a strict and immediate compliance with the orders of the Commissioner and the Inspectors when given in dangerous cases by virtue of the power conferred on them by law and departmental rules and regulations. I wish to particularly call the attention of operators very briefly to the following:

As to conditions: When an inspector visits a mine and observes men working in any part thereof which appears to be dangerous, he has the right and full power under the law to compel cessation of work at that point until such dangerous conditions or defects are remedied. As to practices: In order for a mine to operate, cages and buckets must go up and down shafts; skips or buckets must go up and down inclines; cars or trains of cars must go in and out of tunnels and drifts, and it is in these latter particulars that we find the greatest laxity, such as hauling tools, timbers, explosives or other dangerous material in cages, buckets, cars and skips, **with men,** which is forbidden by law. Unless the laws and rules covering these points are strictly observed, accidents are sure to occasionally occur.

I am again reproducing my article on this subject from my report for 1930.

"Life is the most precious of all man's possessions and the utmost effort on the part of the state, industry, and the individual is justified in the conservation of the lives and unimpaired well-being of the worker. The state of Colorado in 1908 recognized its responsibility for the safety of the mine worker by the enactment of statutes covering the establishment of a department to be known as the Bureau of Mines of the State of Colorado with a commissioner and inspectors and delegating to this department as one of its principal duties the examination of mines, mills, and quarries, as to safety and health conditions. The department has the power to order corrected, under penalty of heavy fine, dangerous conditions found.

"By legislative act of 1911 the state was divided into four inspection districts for the purpose of rigid enforcement of accident prevention laws. The law is mandatory in the requirement of the appointment of a mine inspector for each of the said districts, whose principal duty is to see that each mine is operated in conformity with the standards of safety, the laws of the state, and departmental regulations for the protection of life, limb, and health of employees. The inspectors are to devote their entire time to their duty, and by vigorous inspection most satisfactory results have been obtained as may be seen by consulting the summary at the end of this article, which shows that at the time the act was passed in every 100,000 shifts worked in and about the mines of the state a ratio of 2.212 men were killed. That has gradually been reduced in every eight-year period to the present year, which shows that the fatalities are now reduced to a ratio of only .937 in every 100,000 shifts.

"The Colorado Bureau of Mines, therefore, is vitally interested in the lessening of accidents in mines. Its inspectors examine into safety conditions at mines, mills, smelters, and quarries and make a diligent investigation of fatal and serious accidents and advise where possible means of preventing a repetition of such accidents. Reports on all mine, mill, smelter, and quarry accidents which are furnished by the operators to the State Industrial Commission are studied and compiled for publication in the annual report of this department. There were recently compiled in this department statistics on all metal mine accidents in Colorado for the past three eight-year periods, beginning with the year 1906 up to 1935 inclusive, and the past five years of the present period the summary of which is appended.

"These figures demonstrate that the lessening of accidents in Colorado metal mines as in those of other states requires continued united effort on the part of mine operators and miners and continued inspection and guidance by an adequate force of state mine inspectors.

"The value of state inspection in lessening mine accidents is difficult to enumerate in units only of dollars and cents and has a value to the industry and the public far greater than can be measured on a direct cost basis. We cannot usually say in any particular mine that a certain number of lives have been saved by the righting of recognized dangerous conditions or by safer equipment and practices, but we do know that taking the state or country as a whole dangerous conditions, unsafe equipment, and unsafe practices in mines will each year take its toll of life and suffering and that the righting of such conditions and practices will inevitably save life. We know at the end of each year how many lives have been lost in our mines but we cannot definitely say how many lives have been saved by inspection service; that many lives are thus saved is self-evident, which is borne out by the figures mentioned. State inspection service results not only in the correction of dangerous conditions and practices but it also spurs the mine operator to increased thought and effort toward safety and the miner to increased carefulness. Both miner and operator are reminded by these inspectors that the state has a very definite interest in both the personal security of the miner and the continued successful operation of the mine. Also, the inspector through his visits to numerous mines and through information collected by the department is able to suggest numerous measures which make toward safer and more economical mine operation.

"Summarizing, a state mine inspection department is of very definite value in reducing accidents, promoting the safety and welfare of miner and operator, and in assisting in the successful operation of mines. A state mine inspection department can only operate with proper efficiency and success in reducing accidents if it has an adequate number of inspectors furnished with funds adequate for regular inspections and if it has the cordial and hearty support of the mine operator, the miner, and the public. The Colorado State Bureau of Mines pledges its continued effort toward the reduction of mine accidents and believes that in this most important work it will have, and it expects to have, from the Colorado mine operators, continued and even more hearty support from that highly important factor in the prosperity of our state."

SUMMARY

Three 8-year periods on the basis of 100,000 shifts.

From 1906 to 1914, inc., 23,100,000 shifts were worked, 511 men were killed, ratio per 100,000 shifts............2.212

From 1915 to 1922, inc., 25,468,000 shifts were worked, 342 men were killed, ratio per 100,000 shifts............1.338

From 1923 to 1930, inc., 16,148,154 shifts were worked, 167 men were killed, ratio per 100,000 shifts............1.034

From 1931 to 1935, inc., 7,784,608 shifts were worked, 73 men were killed, ratio per 100,000 shifts............0.937

The following statement made by the Colorado Industrial Commission concerning metal mine accidents has been filed in this office. The same is not a part of the report of the State Bureau of Mines but, because of the increase in the premium rate effective June 1, 1936, is submitted herewith for the information of mine operators in the state.

Year	Non-Comp. Acci-dents	Com-pensable Acci-dents	Total Acci-dents	Earned Premium	Incurred Liability	Cost of Average Accident	Loss Ratio
1934	1,942	442	2,384	$186,585.97	$192,559.41	$807.72	103.2%
1935	3,012	523	3,535	196,116.60	300,783.85	850.87	153.3%
1935 increase over 1934		1,151 or 32.56%		$ 9,530.63 or 4.86%	$108,224.44 or 35.98%		

Note: Upon analyzing the above figures, they definitely point out that there was a material increase in the number of accidents in 1935 over the year 1934 of 32.56 per cent while the premium income increased only 4.86 per cent—with the total incurred compensation and medical liability showing 35.98 per cent increase.

Serious consideration of accident prevention work and enforcement of safety rules among the employees and operators is indicated by the increases shown.

WM. R. SHAW, Actuary,
STATE COMPENSATION INSURANCE FUND.

LOSS RATIO BY YEARS TO DECEMBER 31, 1934

Year	Loss Ratio	Dividend Paid	Dividend Percent
1916	54.7		11.5
1917	33.8		13.5
1918	32.3		15
1919	46.9	$ 61,901.40	5
1920	51.7	26,842.57	15.5
1921	58	22,541.03	15
1922	49.8	15,737.03	15
1923	88.9	15,843.75	15
1924	50.7	15,827.07	15
1925	106.5	16,610.23	15
1926	100.7	22,132.74	15
1927	98.3	40,649.20	20
1928	80.4	27,916.54	20
1929	104.8	31,881.13	22.5
1930	86.7	36,849.48	22.5
1931	67.3	24,513.77	30
1932	132.4	26,758.10	30
1933	161.3	24,345.72	22.5
1934	103.2	56,791.76	20
1935	153.3	23,902.02	6.7
		$491,043.54	

Total earned Premiums	$3,011,008.25 to 12-31-35
Total Dividend paid	491,043.54 to 12-31-35
Average Annual Dividend	16.31%+ Rate Differentials

WM. R. SHAW, Actuary,
STATE COMPENSATION INSURANCE FUND.

FATAL ACCIDENTS

Underground

January 13, Les Parlin, of Leadville, age 22, unmarried, brakeman, employed by the Climax Molybdenum Company on the Climax mine in Lake County, was severely injured by a shot of dynamite. Parlin died from shock and injuries January 15. Violation of safety rule.

February 4, T. C. McCuistian, of Monte Vista, age 32, married, timberman, employed by the Summitville Mines, Incorporated, Rio Grande County, fell 65 feet down a manway which resulted in his death February 5. Failure to use safety devices.

February 15, Buster Waddell, of Climax, age 27, married, miner, employed by the Climax Molybdenum Company, Lake County, was injured by a fall of rock. He died from the result of these injuries on March 22, 1935.

February 21, George Sloan of Fairplay, age 28, married, motorman, employed by the Fairplay Gold Mines, Inc., Park County, was caught between the lip of the chute and the top of motor, while operating an electric battery motor, pushing empty mine cars, and was killed instantly. Carelessness of injured.

March 1, Albert Raymond Scherrer, of Denver, age 48, mucker, employed by the Sullivan and Sullivan Mining Company, Boulder, Colorado, was killed by falling rock. Carelessness of injured.

March 25, John Peschel, of Leadville, age 24, unmarried, cager, employed by M. A. Nicholson on the Ibex mine in Lake County, slipped and injured himself while putting a loaded car on the cage. He died from result of injuries April 10th.

April 2, Henry D. Nichols, of Cripple Creek, age 23, unmarried, miner, employed by the Hidalgo Gold Mines, Inc., lessee of the United Gold Mines Company, Teller County, was killed instantly by a fall of rock. Carelessness of injured. Lack of experience.

April 25, V. E. Saloma, of Telluride, age 33, unmarried, mucker, employed by the Telluride Mining and Milling Company, San Miguel County, was killed by falling down ore pass while tramming ore. Carelessness of injured.

August 20, Oscar Tipton of Victor, age 32, married, miner, employed by the Cresson Consolidated Gold Mining and Milling Company, Teller County, was killed instantly by a fall of rock. Unavoidable accident.

September 5, Webb Genho, of Victor, age 34, married, miner, employed by Paul Prebie and Phoebe Genho, Teller County, was injured by an explosion of caps. He died as a result of these injuries September 7. Carelessness of injured. Lack of experience.

October 22, Earl Shaw, of Boulder, age 21, unmarried, mucker and trammer, employed by the Gold Leaf Mining Company, Boulder County, was injured by a fall of rock. Mr. Shaw died October 23. Carelessness of injured.

November 12, Leonard S. Diehl, of Victor, age 69, married, miner, employed by the United Gold Mines Company of Teller County, was instantly killed by a fall of rock. Unavoidable accident. Had little experience in mining. He was a carpenter.

Shaft

March 4, Edward Carl Bendowsky of Cripple Creek, age 37, married, machineman, employed by the New Zealand Gold Mines Incorporated, Teller County, was caught between the cage floor and a timber of a landing 15 feet above the collar of the Jo Dandy mine shaft. It is supposed that when he saw that the cage was not stopping at the collar, he put his head out, was struck, fell to the floor of the cage, and his head was caught and crushed between the cage and a timber of the upper landing. He was killed instantly. Violation of safety rule.

November 9, Robert Whetstone, of Fort Collins, age 22, married, miner, employed by George Rath and Otto Horne, at the Clara Mine shaft in Boulder County, was riding on a bucket which was being hoisted to the surface by a gasoline power hoist. The gear pinion of the hoist became disengaged allowing the bucket and Mr. Whetstone to fall 100 feet to the bottom of the shaft, causing injuries from which he died shortly after being brought to the surface. Defective hoisting device. Inexperience.

Surface

May 15, George Milo, of Park City, age 29, married, miner, employed by the Fairplay Gold Mines, Incorporated, Park County, was riding a tram from the North London Mine to the mill. The bucket in front of him broke loose and came slanting backwards on the cable hitting the bucket in which Milo was riding causing Milo to fall to the ground 100 feet below. He was instantly killed. Carelessness of injured.

October 15, Newton Montague, of Telluride, age 30, unmarried, miner, employed by the Telluride Mining and Milling Company of San Miguel County, slipped and fell approximately 250 feet from a cable and died instantly. Carelessness of injured.

November 24, Paul H. Zimmerman of Climax, age 19, unmarried, motorman, employed by the Climax Molybdenum Company, of Lake County, was guiding a motor with 7 loaded cars down the grade toward the dump. The motor left the track and overturned pinning Zimmerman beneath it, and killing him instantly. Carelessness of injured. Speed too high.

Placer

March 27, Elmer Roberts of Breckenridge, age 32, married, miner, was killed by falling rock on the Nigger Gulch Placer east of Breckenridge, Summit County. Carelessness of injured.

Mill

June 18, Emil Mammon, of Georgetown, age 47, married, mine superintendent, employed by the Waldorf Gold, Incorporated, Clear Creek County, was injured while attempting to adjust a clutch while machinery was in operation. He died from these injuries July 1st. Carelessness of injured.

September 5, Peter D. Duff, of Colorado Springs, age 60, married, foreman, employed by the Golden Cycle Corporation, El Paso County, foreman of a crew which was moving a section of cast gearing under and past a moving belt, which had a clearance of seven feet in the passageway where the casting was being moved. He stood in a cross-passageway where the belt descended to the floor level. He stepped backwards and raised his head. The metal lacing on the belt struck him on top of the head, and killed him instantly. Carelessness of injured and lack of safety devices.

Smelter

November 25, Ludwig Slack of Leadville, age 50, widower, motorman, employed by the Arkansas Valley Smelter, Lake County, was caught between two loaded ore cars. Injury to his left leg necessitated amputation December 2nd, and Slack died December 3rd. Carelessness of injured and violation of safety rules.

TABLE II

DAYS OF EMPLOYMENT IN AND ABOUT MINES, MILLS AND SMELTERS AND NUMBER OF MEN KILLED AND INJURED PER 10,000 DAYS OF EMPLOYMENT DURING THE YEARS 1934 AND 1935

	Employment Days of		Killed				Serious Injury (Time Lost Over 14 Days)				Slight Injury (Time Lost Under 14 Days)			
			1934		1935		1934		1935		1934		1935	
	1934	1935	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days
Underground	1,016,847	1,134,373	15	.1475	14	.1234	235	2.311	274	2.415	516	5.074	649	5.721
Surface	381,889	421,389	1	.0261	3	.0711	50	1.309	115	2.729	122	3.194	203	4.817
Mills	89,225	273,644	..	....	2	.0730	23	2.577	18	.6577	40	4.483	16	.5847
Smelters	84,666	93,108	..	....	1	.1074	5	.5905	4	.4296	...	....	2	.2148
Quarries	47,995	134,984	..	....	..	....	12	2.500	21	1.555	24	5.000	26	1.926
Placers	56,796	120,876	1	.1760	1	.0827	4	.7042	18	1.489	25	4.401	31	2.564

Eleven fatalities reported to the Bureau of Mines in 1935—one a visitor falling down a shaft on a certain property; one heart failure, not an accident; one falling down a mountainside from a trail leading to a mine; one from a slight leg injury, aggravating a former very serious injury, the latter being the cause of death; one from a strain and while convalescing, contracted pneumonia, and six men not on duty lost their lives in a bunkhouse fire—are not included in the above tabulation, even though they may be in part or all compensable.

There was also reported one fatality in rock excavation, and three in road construction, which, under a recent law, were placed under the jurisdiction of this department but cannot by their very nature be classed as mine accidents. The number of fatalities given in Table II and the ones mentioned above make up the total of all fatalities reported during 1935 to the Bureau of Mines.

The difference between the total number of metal mine accidents given in the statement of the Industrial Commission and the total in Table II of this report is explained by the fact that the Industrial Commission has to keep a record of all accidents compensable and non-compensable, where the slightest payment is made for medical or other causes, while the Bureau of Mines does not list any accident where the loss of time is under two days and at least 60 per cent are of that class.

TABLE III

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1934 AND 1935

	Fatal		Serious Injuries (Time lost over 14 days) Permanent Total Disability		Permanent Partial Disability		Temporary Disability		Slight Injuries (Time lost under 14 days)	
UNDERGROUND	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
1. Fall of rock or ore from roof or wall	7	6	..	..	..	2	45	60	96	96
2. Rock or ore while loading at working face	..	..	..	..	..	..	1	18	6	37
3. Hand tools	..	..	..	..	..	..	10	9	16	37
4. Explosives	2	2	..	..	1	2	11	5	5	4
5. Haulage	1	2	..	..	..	4	22	18	40	71
6. Falling down chute, winze, raise, or stope	2	2	..	..	1	..	24	22	18	31
7. Run of ore from chute or pocket	..	..	..	..	1	..	13	4	21	14
8. Drilling	..	..	..	..	2	1	19	34	86	95
9. Electricity	..	..	..	..	..	..	..	..	5	..
10. Machinery (other than locomotives or drills)	..	..	..	..	2	..	..	12	4	8
11. Mine fires	..	..	..	..	..	..	..	..	..	..
12. Suffocation from natural gases	1	..	..	..	1	1	1	..	..	1
13. Inrush of water	..	..	..	..	..	..	..	..	..	..
14. Stepping on nail	..	..	..	..	..	..	1	1	8	8
15a. Handling materials (other than rock or ore)	..	..	..	..	1	..	22	11	36	48
15b. Other causes	..	..	..	..	2	..	42	54	154	175
Total	13	12	..	..	11	10	211	248	495	625
SHAFT										
16. Falling down shaft	1	1	..	..	1	..	..	1	1	2
17. Objects falling down shaft	..	..	..	..	..	..	2	1	3	3
18. Breaking of cables	..	..	..	..	..	..	1	..	..	..
19. Overwinding	..	..	..	..	..	..	..	..	..	..
20. Cage, skip, or bucket	..	1	..	..	..	1	5	11	8	9
21. Other causes	1	..	..	..	3	..	1	2	9	10
Total	2	2	..	..	4	1	9	15	21	24

SURFACE SHOPS AND PLANTS										
22. Mine cars, mine locomotives, or aerial trams	..	1	..	..	..	..	6	10	13	13
23. Railway cars and locomotives	..	..	..	..	..	..	..	1	1	1
24. Run or fall of ore in or from ore bins	..	..	..	..	1	..	2	5	1	4
25. Falls of persons	1	2	..	..	1	..	8	32	15	31
26. Stepping on nail	..	..	..	..	..	..	1	..	1	7
27. Hand tools	..	..	..	..	..	1	1	8	10	20
28. Electricity	..	..	..	..	..	..	1	3	3	3
29. Machinery	..	..	..	..	..	..	5	8	13	20
30a. Handling materials	..	..	..	..	..	..	11	19	15	35
30b. Other causes	..	..	.	..	..	..	13	28	50	69
Total	1	3	..	..	2	1	48	114	122	203
PLACER MINES—DREDGING										
1. Machinery	..	..	..	..	..	..	1	5	2	10
2. Electricity	..	..	..	..	..	..	1	..	1	1
3. Boiler explosions or bursting of steam pipes	..	..	..	..	..	..	..	..	..	..
4. Falls of persons	..	..	..	..	..	..	1	4	1	3
5. Hand tools	..	..	..	..	..	..	..	1	..	2
6. Other causes	1	1	..	..	..	..	1	8	21	15
Total	1	1	..	..	..	..	4	18	25	31
ORE-DRESSING AND MILLING										
1. Haulage (cars and motors)	..	..	..	..	..	..	1	1	1	..
2. Railway cars or locomotives	..	..	..	..	..	..	..	..	..	1
3. Crushers, rolls, or stamps	..	..	..	..	..	..	..	..	2	..
4. Tables, jigs, etc.	..	..	..	..	..	..	..	..	..	..
5. Other machinery	..	2	..	..	..	..	5	7	6	4
6. Falls of persons	..	..	..	..	..	..	4	2	3	1
7. Suffocation in ore bins	..	..	..	..	..	..	..	..	..	..
8. Falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	1	2	3
9. Cyanide or other poisoning	..	..	..	..	..	..	..	..	..	..
10. Scalding (steam or water)	..	..	..	..	..	..	1	..	..	..
11. Electricity	..	..	..	..	..	..	..	1	2	1
12. Hand tools	..	..	..	..	..	..	1	..	4	1
13. Stepping on nail	..	..	..	..	..	..	..	..	2	1

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1934 AND 1935—Continued

	Fatal		Serious Injuries (Time lost over 14 days)						Slight Injuries (Time lost under 14 days)	
			Permanent Total Disability		Permanent Partial Disability		Temporary Disability			
	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
14. Flying pieces of rock from sledging or crushing	..	..	..	..	..	..	..	1	..	1
15a. Handling materials	..	..	..	..	..	..	..	2	..	1
15b. Other causes	..	..	..	..	..	..	11	3	18	2
Total	..	2	..	..	..	..	23	18	40	16
SMELTER										
16. Haulage (cars, motors, etc.)	..	1	..	..	..	..	..	1	..	1
17. Railway cars or locomotives	..	..	..	..	..	..	..	1	..	..
18. Cranes	..	..	..	..	..	..	..	..	..	..
19. Other machinery	..	..	..	..	..	..	..	..	..	..
20. Falls of persons	..	..	..	..	..	..	..	..	..	..
21. Suffocation in ore bins	..	..	..	..	..	..	..	..	..	..
22. Flying or falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	..	..
23. Gas (burns or asphyxiation)	..	..	..	..	..	..	2	..	..	..
24. Scalding (steam or water)	..	..	..	..	..	..	..	..	..	..
25. Electricity	..	..	..	..	..	..	..	..	..	..
26. Hand tools	..	..	..	..	..	..	..	..	..	..
27. Stepping on nail	..	..	..	..	..	..	..	..	..	..
28. Burns from matte, slag, or molten metal (pouring or spilling)	..	..	..	..	..	..	3	..	..	..
29. Hot-metal explosion	..	..	..	..	..	..	..	1	..	..
30a. Handling materials	..	..	..	..	..	..	..	1	..	..
30b. Other causes	..	..	..	..	..	..	..	..	..	1
Total	..	1	..	..	..	..	5	4	..	2

AUXILIARY WORKS										
31. Haulage (cars and motors)	..	..	..	..	..	..	..	..	..	..
32. Railway cars or locomotives	..	..	..	..	..	..	..	1	..	..
33. Falls of persons	..	..	..	..	..	..	..	..	..	..
34. Falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	..	..
35. Stepping on nail	..	..	..	..	..	..	..	..	..	..
36. Hand tools	..	..	..	..	..	..	..	..	..	..
37. Electricity	..	..	..	..	..	..	..	1	..	..
38. Machinery	..	..	..	..	..	..	..	..	..	..
39. Failure of ladder, scaffold, or other support	..	..	..	..	..	..	..	..	..	..
40. Handling hot materials	..	..	..	..	..	..	..	..	..	..
41a. Handling other materials	..	..	..	..	..	..	..	..	..	..
41b. Other causes	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	2	..	..
IN AND ABOUT QUARRY										
1. Falls or slides of rock or overburden	..	..	..	..	..	..	1	1	2	1
2. Handling rock at face	..	..	..	..	..	..	3	5	3	6
3. Timber or hand tools	..	..	..	..	..	..	..	1	2	1
4. Explosives—										
(a) Transportation	..	..	..	..	..	..	..	..	..	..
(b) Charging	..	..	..	..	..	..	..	..	..	..
(c) Drilling into old holes	..	..	..	..	..	..	..	..	..	..
(d) Striking in loose rock	..	..	..	..	..	..	..	..	..	..
(e) Thawing	..	..	..	..	..	..	..	..	..	..
(f) Caps, detonators, etc.	..	..	..	..	..	..	..	..	..	..
(g) Unguarded shots	..	..	..	..	..	..	..	..	..	..
(h) Returned too soon	..	..	..	..	..	..	..	..	..	..
(i) Premature shot	..	..	..	..	..	..	..	..	..	..
(j) Delayed blast	..	..	..	..	..	..	..	..	..	..
(k) Miscellaneous			..	.		..	..	..	..	1

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1934 AND 1935—Continued

	Fatal		Serious Injuries (Time lost over 14 days)						Slight Injuries (Time lost under 14 days)	
			Permanent Total Disability		Permanent Partial Disability		Temporary Disability			
	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
5. Haulage—										
(a) Hand and animal	..	..	..	..	..	..	..	1	..	1
(b) Mechanical	..	..	..	..	..	..	1	1	..	1
6. Falling into quarry from surface, benches, or face	..	..	..	..	..	..	1	3	2	2
7. Falling from hoist, derricks, ladders, etc.	..	..	..	..	..	..	..	..	..	..
8. Drilling and channeling (by machinery or hand)	..	..	..	..	..	..	1	3	2	1
9. Electricity (shock or burns)	..	..	..	..	..	..	..	..	..	..
10. Machinery—										
(a) Cables and attachments	..	..	..	..	..	..	..	..	..	..
(b) Guys, masts, booms and attachments	..	..	..	..	..	..	..	..	..	..
(c) Pumps and hoisting engines	..	..	..	..	..	..	..	..	..	..
11. Flying objects	..	..	..	..	..	..	1	1	4	6
12. Nails, splinters, etc.	..	..	..	..	..	..	..	..	..	..
13. Boiler and air tank explosions	..	..	..	..	..	..	..	..	..	..
14. Falling objects	..	..	..	..	..	..	..	2	2	2
15. Burns	..	..	..	..	..	..	..	..	1	2
16. Other causes	..	..	..	..	..	..	4	3	6	2
Total	..	..	..	..	..	..	12	21	24	26
OUTSIDE WORKS										
17. Haulage—										
(a) Hand and animal	..	..	..	..	..	..	..	..	..	..
(b) Mechanical	..	..	..	..	..	..	..	..	..	..
18. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..
19. Crushers	..	..	..	..	..	..	..	..	..	..
20. Cranes, derricks, etc.	..	..	..	..	..	..	..	..	..	..
21. Other machinery	..	..	..	..	..	..	..	..	..	..

22. Falls of persons	..	..	..	..	..	..	..	1	..	..
23. Hand tools	..	..	..	..	..	..	..	..	..	..
24. Electricity	..	..	..	..	..	..	..	..	..	..
25. Nails, splinters, etc	..	..	..	..	..	..	..	..	..	..
26. Flying pieces of rock from sledging or crushing	..	..	..	..	..	..	..	2	..	..
27. Flying or falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	..	..
28. Handling rock at face	..	..	..	..	..	..	..	1	..	1
29. Burns	..	..	..	..	..	..	..	..	..	1
30. Other causes	..	..	..	..	..	..	..	1	..	1
Total	..	..	..	..	..	..	..	5	..	3

TABLE IV

CLASSIFICATION ACCORDING TO CAUSE AND OCCUPATION OF THE FATAL ACCIDENTS THAT OCCURRED IN THE METAL MINING AND QUARRYING INDUSTRY OF COLORADO IN THE YEARS 1934 AND 1935.

	MINES															
	Superintendents, Foremen and Engineers		Machine Men and Helpers		Miners		Loaders, Shovelers, Muckers and Trammers		Trackmen, Pipemen, Pumpmen and Compressormen		Cage Tenders and Station Cagers		Carpenters, Timbermen and Helpers		Electricians, Motormen and Helpers	
UNDERGROUND	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
1. Falls of rock or ore from roof or wall	..	..	4	..	1	4	..	2	..	..	..	..	2	..	..	..
2. Handling rock or ore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Timber or hand tools	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Explosives	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	1
5. Haulage	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
6. Persons falling down chute, winze, raise or stope	..	..	..	..	1	..	..	1	..	..	..	..	1	1	..	..
7. Run of ore from chute or pocket	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Drilling (by machine or hand drills)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Electricity	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Machinery other than 5 or 8.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Mine fires	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Suffocation from natural gases	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Inrush of water	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Nails and splinters	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Other causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	5	..	3	5	1	3	..	..	..	1	3	1	1	2
SHAFTS																
16. Falling down shaft	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..
17. Objects falling down shaft	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

18. Breaking of cables	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19. Overwinding	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20. Cage, skip or bucket	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
21. Other causes	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	1	1	1	..	..	..	..	1	..	..	..	..	..

SURFACE ACCIDENTS

	Superintendents and Foremen		Engineers, Firemen and Hoistmen		Blacksmiths and Mechanics		Carpenters and Topmen		Electricians		Others	
	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
22. Haulage	..	..	..	..	..	..	..	..	..	..	..	1
23. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..	..	..
24. Run or fall of ore in or from ore bins	..	..	..	..	..	..	..	..	..	..	..	..
25. Falls of persons	1	..	..	..	..	..	..	..	..	..	..	2
26. Nails and splinters	..	..	..	..	..	..	..	..	..	..	..	..
27. Hand tools, axes, bars, etc	..	..	..	..	..	..	..	..	..	..	..	..
28. Electricity	..	..	..	..	..	..	..	..	..	..	..	..
29. Machinery	..	..	..	..	..	..	..	..	..	..	..	..
30. Other causes	..	..	..	..	..	..	..	..	..	..	..	..
Totals	1	..	..	..	..	..	..	..	..	..	..	3

MILLS

	Superintendents and Foremen		Grinding Machinery Men and Millmen		Concentrator Men		Laborers		Carpenters Mechanics		Aerial Tram Men and Conveyor Men	
	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
1. Haulage system	..	..	..	..	..	..	..	..	..	..	..	..
2. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..	..	..
3. Crushers, rolls or stamps	..	..	..	..	..	..	..	..	..	..	..	..
4. Tables, jigs, etc.	..	..	..	..	..	..	..	..	..	..	..	..
5. Other machinery	..	1	..	..	..	..	..	..	..	..	..	..
6. Falls of persons	..	..	..	..	..	..	..	..	..	..	..	..
7. Suffocation in ore bins	..	..	..	..	..	..	..	..	..	..	..	..

CLASSIFICATION ACCORDING TO CAUSE AND OCCUPATION OF THE FATAL ACCIDENTS THAT OCCURRED IN THE METAL MINING AND QUARRYING INDUSTRY OF COLORADO IN THE YEARS 1934 AND 1935—Continued.

MILLS—Continued

	Superintendents and Foremen		Grinding Machinery Men and Millmen		Concentrator Men		Laborers		Carpenters Mechanics		Aerial Tram Men and Conveyor Men	
	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935	1934	1935
8. Falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	..	..	..	..
9. Cyanide or other poisoning	..	..	..	..	..	..	..	..	..	..	..	..
10. Scalding (steam or water)	..	..	..	..	..	..	..	..	..	..	..	..
11. Electricity	..	..	..	..	..	..	..	..	..	..	..	..
12. Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..	..	..	..	..
13. Nails, splinters, etc	..	..	..	..	..	..	..	..	..	..	..	..
14. Flying pieces of rock from sledging or crushing	..	..	..	..	..	..	..	..	..	..	..	..
15. Other causes	..	1	..	..	..	..	..	..	..	..	..	..
Totals	..	2	..	..	..	..	..	..	..	..	..	..

SMELTERS

	Superintendents and Foremen		Laborers		Motormen and Switchmen		Feeders and Furnace Men and Charge Wheelers	
	1934	1935	1934	1935	1934	1935	1934	1935
1. Haulage system	..	..	..	..	..	1	..	..
2. Railway cars and locomotives	..	..	..	..	..	..	..	..
3. Cranes	..	..	..	..	..	..	..	..
4. Other machinery	..	..	..	..	..	..	..	..
5. Falls of persons	..	..	..	..	..	..	..	..
6. Suffocation in ore bins	..	..	..	..	..	..	..	..
7. Flying or falling objects	..	..	..	..	..	..	..	..
8. Gas (burns or asphyxiation)	..	..	..	..	..	..	..	..

9. Scalding (steam or water)	..	..	..	..	..	..	..	..
10. Electricity	..	..	..	..	..	..	..	..
11. Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..
12. Nails, splinters, etc.	..	..	..	..	..	..	..	..
13. Burns, from matte, slag or molten metal (pouring or spilling)	..	..	..	..	..	..	..	
14. Hot metal explosions	..	..	..	..	..	..	..	.
15. Other causes	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	1	..	..

QUARRIES, CLAY PITS AND OIL SHALE MINES

	Superintendents and Foremen		Teamsters		Drillmen		Laborers	
	1934	1935	1934	1935	1934	1935	1934	1935
1. Haulage	..	..	..	..	..	..	..	..
2. Machinery	..	..	..	..	..	..	..	..
3. Other causes	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	..	..

PLACERS AND DREDGES

	Miners		Laborers		Dredgemen	
	1934	1935	1934	1935	1934	1935
1. Machinery	..	..	..	..	..	..
2. Electricity	..	..	..	..	..	..
3. Other causes	1	1	..	..	..	..
Totals	1	1	..	..	..	..

ROCK EXCAVATIONS

	Superintendents and Foremen		Laborers	
	1934	1935	1934	1935
1. Falls of persons	..	..	..	..
2. Machinery	1	..	..	..
3. Other causes	..	..	2	..
Totals	1	..	2	..

LIST OF OPERATING MINES IN VARIOUS COUNTIES IN COLORADO

OPERATING MINES IN BOULDER COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Alaska	Ward	Dewees Gold Mines Company	314 Exchange Bldg., Denver	Gold, Silver (c)
Alcyone	Ward	M. C. Frazier	2465 20th Street, Boulder	Gold
Amalgan Thief	Sugar Loaf	Fowler and Fowler	803 E. & C. Bldg., Denver	Gold
Anchor	Sugar Loaf	Great Western Trust	327 C. A. Johnson Building, Denver	Gold
Atlantic	Jamestown	N. A. Brown	Jamestown	Gold, Silver (c)
B. & M.	Ward	Dr. C. D. Eggeman	220 Commonwealth Building, Denver	Gold, Silver
Baltimore (a)	Boulder	W. E. Shull	Brighton	Gold, Silver (c)
Barron	Boulder	Garfield Charles	Boulderado Hotel, Boulder	Gold, Silver
Belle	Gold Hill	St. Joe Mining and Milling Co.	814 Pearl Street, Boulder	Gold, Silver
Bellvue	Gold Hill	Dr. Jean Gale	737 Republic Bldg., Denver	Gold
Ben C. Lowell	Boulder	Arthur Sorey and Carl Egle	1039 Maxwell Street, Boulder	Gold, Silver
Big Five (m)	Ward	Ward Big Five Gold Mining Co.	Ward	Gold, Silver
Big Horn	Gold Hill	Carl Egle and Associates Homestake Gold Corporation	1039 Maxwell Street, Boulder 414 Equitable Bldg., Denver	Gold, Silver
Buena Ventura	Gold Hill	Allied Gold Mining Company	John R. Wolff, Boulder	Gold
Cash (a)	Boulder	H. C. Straughn and Steelsmith	635 1st Avenue, Boulder	Gold, Silver
Celestial (a)	Ward	G. C. Gibson and Associates	Ward	Gold, Silver
Chingis Kahn and Poorman	Boulder	J. G. Clark and Associates	940 10th Street, Boulder	Gold, Silver
Clara	Eldora	J. A. Gilfillan, Jr.	Platteville	Gold
Cold Spring (m)	Nederland	Wolf Tongue Mining Company	310 First National Bank Bldg., Denver	Tungsten
Cold Springs	Gold Hill	St. Joe Mining and Milling Co.	804 Pearl Street, Boulder	Gold, Silver
Columbus (a)	Gold Hill	George Haggard and Associates	Gold Hill	Gold, Silver
Croesus (a)	Boulder	Frank Farnsworth and George E. Karrer	Salina Star Route, Boulder	Gold, Silver
Cross (a)	Nederland	Cross Gold Mining Company	1319 Spruce Street, Boulder	Gold, Silver
Cross No. 4	Nederland	Bethona Tungsten Mining Company	Louisville	Tungsten
Dime	Sugar Loaf	T. R. Bice	Salina	Gold
Dolly Varden	Sugar Loaf	P. A. Slattendale	Salina	Gold
Doss	Sugar Loaf	J. M. A. Erbaugh	Boulder	Gold
Eclipse (m)	Boulder	Magnolia Consolidated Gold Mine Co.	424 Republic Bldg., Denver	Gold, Silver
Ellen	Gold Hill	Mrs. W. L. Armstrong	735 Spruce Street, Boulder	Gold
Emancipation	Boulder	A. H. Scruggs and Associates	621 Pine Street, Boulder	Gold, Silver
Empress	Sugar Loaf	John G. Clark	Boulder	Gold
Eureka Alta (a)	Sugar Loaf	Grover Abbott and Associates	Sugar Loaf	Gold, Silver
Faircount	Sugar Loaf	S. A. Armstead and A. H. Voight	877 11th Street, Boulder	Tungsten
Fairfax	Boulder	Gold Hill Development, Ltd.	1400 E. 47th Ave., Denver	Gold, Silver
Fairview (m)	Nederland	Rocky Mountain Gold Mines, Inc.	312 Easton Building, Oakland, California	Gold, Silver, Lead

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Fortune	Magnolia	Ferguson and Renfro	Boulder	Gold
Franklin	Sugar Loaf	Excelsior Gold Mining Company	3249 West Fairview, Denver	Gold, Silver
G. and S.	Boulder	G. and S. Mines, Inc.	504 Symes Building, Denver	Gold, Silver
Gold Coin	Eldora	W. L. Harpel	Eldora	Gold
Gold Farm (a)	Boulder	Miss M. Crook and Associates	1536 York Street, Denver	Gold, Silver
Golden Queen	Ward	James and Joe Walters	Ward	Gold, Silver
Goldsmith Maid	Gold Hill	Sullivan and Sullivan Mining Co.	Boulder, Salina Star Route	Gold, Silver
Good Friday	Sugar Loaf	Star Tungsten Company	3330 Wilson Ave., Chicago, Ill.	Tungsten
Grand Republic (m)	Boulder	St. Joe Mining & Milling Company	804 Pearl Street, Boulder	Gold, Silver
Grant (a)	Gold Hill	Grant Mining Company	1063 Mapleton, Boulder	Gold, Silver
Grey Eagle	Gold Hill	St. Joe Mining & Milling Company	804 Pearl Street, Boulder	Gold, Silver
Hawkeye	Gold Hill	Arthur Turner	Sunshine	Gold
Hereafter	Boulder	Thad White and Associates	1622 18th Street, Boulder	Gold, Silver
High Grade	Sugar Loaf	Lee Peterson	Sugar Loaf	Gold
High Line (a)	Gold Hill	H. H. Hackett	768 Colorado Blvd., Denver	Gold, Silver
Homestake	Ward	Homestake Gold Corporation	414 Equitable Bldg., Denver	Gold, Silver
Hoodoo	Gold Hill	Clifford W. Mills	525 Kittredge Bldg., Denver	Gold
Ingram (a)	Boulder	Mines Development Corporation	200 First National Bank Bldg., Boulder	Gold, Silver
Jewel	Gold Hill	J. M. Pastore	Gold Hill	Gold
John Jay (m)	Jamestown	Associated Metal Mines, Inc.	609 Cooper Building, Denver	Gold, Silver
Kekeonga	Magnolia	Magnolia Consolidated Gold Mines Company, R. O. Smith	424 Republic Bldg., Denver	Gold
Keystone (m)	Magnolia	Clifford A. Staley	Magnolia Star Route, Boulder	Gold, Silver
Lady Franklin	Magnolia	George Jump	Box 461, Boulder	Gold
Last Chance	Jamestown	Boulder Metals Corporation	1103 Pennsylvania Avenue, Boulder	Gold, Silver
Little Johnnie (a) (m)	Boulder	McAnnally Mines, Inc.	Boulderado Hotel, Boulder	Gold, Silver
Little Pittsburg	Magnolia	Boulderado Mining Company	1919 13th Street, Boulder	Gold
Livingston (a)	Sugar Loaf	The Livingston Mining Company	Box 333, Boulder	Tungsten
Logan	Boulder	Logan Metals Company	Box 333, Boulder	Gold, Silver
Longfellow and Golden Age (a)	Jamestown	Precious Metals Syndicate	220 Delaware Avenue, Buffalo, New York	Gold, Silver
Lord Byron	Sugar Loaf	Anne C. Hendershott	358 Arapahoe, Boulder	Gold
Lucky Star (m)	Gold Hill	Hobart Auer and Associates	522 Pine Street, Boulder	Gold, Silver
Mammoth (m)	Nederland	W. L. Tanner and S. H. Tanner	2144 17th Street, Boulder	Tungsten
Milan	Sugar Loaf	Milan Mining Company	Masonic Temple Bldg., Boulder	Gold, Silver
Milwaukee (a)	Ward	Milwaukee Mining Company, Richard Hamm	Longmont	Gold, Silver
More	Wallstreet	A. B. More	Wallstreet	Gold
Morning Star (m)	Ward	Ward Mines Syndicate	616 Patterson Bldg., Denver	Gold, Silver
Mount Pleasant (a)	Jamestown	Jamestown Holding Company Robert E. Lowther and Associates	Jamestown, Colo. 220 Delaware Avenue, Buffalo, New York	Gold, Silver Gold, Silver
Mountain Lion	Boulder	S. B. Alexander	Box 489, Boulder	Gold, Silver
Nancy Group (m)	Boulder	A. H. Scruggs	621 Pine Street, Boulder	Gold, Silver

(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN BOULDER COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Nelson	Ward	Nelson Leasing Company	Ward	Gold, Silver
Nil Desperandum	Sunshine	S. M. Walker	530 Cooper Building, Denver	Gold
Number Five (a)	Ward	Grant and Associates	Ward	Gold, Silver (c)
Occidental (a) (m)	Ward	Wm. Davenport and Associates	Ward	Gold, Silver
One and Three Quarters	Nederland	William Todd, Agent	Nederland	Tungsten
Pennsylvania	Boulder	Alex McLellan and Roy Peterson	930 14th Street, Boulder	Tungsten
Philadelphia (a)	Nederland	G. W. Kent	1913 Mapleton Ave., Boulder	Tungsten (c)
Plain View	Sunshine	S. M. Walker	530 Cooper Building, Denver	Gold
Plow Boy	Gold Hill	Arthur Blystad	2325 Spruce Street, Boulder	Gold
Princess Ukulele	Sugar Loaf	Carl Burke and Associates	2041 8th Street, Boulder	Tungsten
Prussian	Gold Hill	Chas. A. Wolcott	Boulder	Gold
Pueblo Belle Group	Boulder	Major Metals Mining Company	1026 Pine Street, Boulder	Tungsten
Recluse	Sugar Loaf	Roy Peterson and Alex McLellan	930 14th Street, Boulder	Gold, Silver
Red Gold	Boulder	W. F. Lumsden and George Apra	1636 Albion Street, Denver	Gold, Silver
Red Signe (a)	Boulder	H. E. Vickery and Associates	1035 8th Street, Boulder	Gold, Silver, Tungsten
Richmond	Boulder	Mines Development Corporation	200 First National Bank Bldg., Boulder	Gold, Silver
Rocky Mountain (a)	Jamestown	A. B. Smith and Associates	Boulder	Tungsten
Roslyn	Nederland	R. H. Beckett	Box 173, Nederland	Gold, Silver
Ruby (a)	Ward	Riley Brothers	2319 Pine Street, Boulder	Gold, Silver
Saint Joe	Gold Hill	Saint Joe Mining and Milling Co.	804 Pearl Street, Boulder	Gold, Silver
Sax and Fox	Boulder	Brocolo Mining Co., Robert Bormier	12th and Spruce Sts., Boulder	Gold, Silver
Scotia	Gold Hill	Robert F. Clark	3062 Blake Street, Denver	Gold, Silver
Senator Hill (a)	Boulder	A. C. Wollenweber and Associates	Monticello Hotel, Boulder	Gold, Silver
Seven Thirty	Gold Hill	Cobalt Gold Mining Company	Gold Hill	Gold, Silver
Shirley	Ward	Tom Lyle	Ward	Gold, Silver
Simon	Sugar Loaf	George Simon	1938 Larimer Street, Denver	Gold
Slide (m)	Gold Hill	The Slide Mines, Inc.	614 E. & C. Bldg., Denver	Gold, Silver
Smuggler (m)	Lyons	Smuggler Mining and Milling Company, Inc.	3337 Larimer Street, Denver	Gold, Silver
Sparkling Jewel (a)	Sugar Loaf	R. Krough and Associates	Sugar Loaf	Gold, Silver
Sun and Moon	Gold Hill	S. V. Coffman	Boulder	Gold
Sunshine	Boulder	George D. Parks and Associates	Salina Star Route, Boulder	Gold, Silver
Tambourine (a)	Boulder	F. P. Lilley	437 Broadway, Denver	Gold, Silver
Tippecanoe (a)	Gold Hill	St. Joe Mining and Milling Co.	804 Pearl Street, Boulder	Gold, Silver
Tornado	Sugar Loaf	W. L. Hartley	Wallstreet	Gold
United Empire Group	Boulder	United Empire Gold Mines Company	Citizens National Bank Bldg., Boulder	Gold, Silver
Vasco Group	Nederland	Gold, Silver and Tungsten, Inc.	Box 296, Boulder	Tungsten
Vasco No. 10 (a)	Nederland	George Jump and Associates	10th and Walnut Sts., Boulder	Tungsten
Wano (m)	Jamestown	Wano Milling and Power Company	Midland Savings Bldg., Denver	Gold, Silver
Washburn	Gold Hill	O. A. Johnson	Box 384, Boulder	Gold

White Raven (a) (m)	Ward	White Raven Mining Company	233 Commonwealth Building, Denver	Gold, Silver
Winona	Gold Hill	The Buckton Company	202 Boston Bldg., Denver	Gold, Silver
Wisconsin (a)	Sugar Loaf	United American Mining Corporation	Sugar Loaf, Colorado	Gold, Silver
Woodland (a)	Gold Hill	Mines Development Corporation	200 First National Bank Bldg., Boulder	Gold, Silver
Wood Mountain (m)	Boulder	Gold, Silver and Tungsten, Inc.	940 10th Street, Boulder	Gold, Silver
Yellow Jacket (a)	Boulder	C. H. Craig	1107 10th Street, Boulder	——— (c)
Yellow Star	Sugar Loaf	Albert St. George and Associates	Sugar Loaf	Gold, Silver

OPERATING MINES IN CHAFFEE COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Annie C.	Buena Vista	J. P. and E. M. Edwards and Associates	Buena Vista	Gold
Aztec	Granite	Mrs. Madge B. Dean	5513 Carlton Way, Hollywood, California	Gold, Silver
Big Chief Tunnel	Buena Vista	E. A. Walker and Associates	Buena Vista	Gold
Delay Tunnel (a)	Salida	American Fluorspar Corporation, H. A. Hamilton	McIntyre Building, Colorado Springs	Fluorspar
Doris Ruby Group (a)	Buena Vista	Doris Ruby Mining Company, Inc.	Box 35, Buena Vista	Gold (c)
H. and H.	Granite	H. and H. Mining Company, Care C. B. Hersey	Granite	Gold
Hawkeye Tunnel	Monarch	Joe C. McKeen	Garfield	Gold, Silver, Lead (c)
Independence (a)	Salida	G. E. Devareaux	Box 324, Salida	Gold, Silver, Copper, Lead
Iron Chest	Buena Vista	Iron Chest Mining Syndicate, J. F. Klaes	Buena Vista	Gold, Silver, Lead
Joe Robesnick	Salida	Steve Trefone	Salida	Fluorspar
Little Annie	Buena Vista	A. E. Smith	Buena Vista	Gold, Silver
Mary Murphy	St. Elmo	Mary Murphy Gold Mining Co.	306 Boston Bldg., Denver	Gold, Silver, Lead
		Lee Dillon Lease	Buena Vista	
		Harry Payne Lease	Buena Vista	
		S. E. Burleson Lease	Salida	
May Flower	Granite	May Flower Mining Company	Box 38, Granite	
Mount Harvard	Granite	Williams Brothers	1012 Santa Fe Ave., Pueblo	Gold
Sunset Shaft	Buena Vista	Pack Rat Lease, C. E. O'Brien	Leadville	Gold, Silver, Copper (c)
Trafalger	Granite	W. W. Winburn	1414 Forest Street, Denver	Gold
Yellow Bird	Buena Vista	Yellow Bird Mining Company, George L. Breithaupt	Buena Vista	Gold, Silver, Copper (c)

(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN CLEAR CREEK COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Alice (m)	Idaho Springs	Porphyry Mines, Inc.	Box 476, Idaho Springs	Gold, Silver, Copper
American Sisters (m)	Lawson	O. N. Parsons and Associates	Orient Hotel, Denver	Gold, Silver, Lead
Atlantic and Rifle (m)	Empire	D. A. Odell and Asociates	Empire	Gold, Silver, Lead, Copper
Bald Eagle and Fulton	Idaho Springs	Cornelius Smith and George Light	Idaho Springs	Gold, Silver
Bard Creek (a)	Empire	A. F. Mayham	Idaho Springs	Gold, Silver, Lead, Zinc
Bellevue Hudson	Lawson	Norse Mines Company	1001 U. S. National Bank Bldg., Denver	Gold, Silver
Black Eagle (m)	Idaho Springs	Bismarck Mines, Inc. Consolidated Smelter and Metals Co.	210 Tabor Bldg., Denver 3557 Wazee Street, Denver	Gold. Silver
Black Prince (a)	Empire	Black Prince Mining Company	323 Central Block, Pueblo	Gold, Silver (c)
Brighton	Idaho Springs	Marmick Joan Mining Company	703 Republic Bldg., Denver	Gold, Silver, Lead
Burns-Moore (a)	Idaho Springs	Humboldt Consolidated Mining Co.	304 California Bldg., Denver	Gold, Silver (c)
Buxton (a)	Silver Plume	Mancos Gold Mining Company	506 U. S. Natl. Bank Bldg., Denver	(c)
Calvin	Idaho Springs	Horace Traynor and Associates	Idaho Springs	Gold, Silver
Capital Prize	Georgetown	Grand Prize Mining Corporation	Box 157, Littleton	Gold, Silver (c)
Cardegan	Idaho Springs	Orlando Mining Company	Box 421, Idaho Springs	Gold, Silver
Central	Idaho Springs	North American Mining Company	405 Interstate Trust Bldg., Denver	Gold, Silver
Commonwealth (m)	Georgetown	C. N. Lyons and Associates	Idaho Springs	Gold, Silver, Lead
Cyclone	Silver Plume	Continental Divide Development Company	731 U. S. Natl. Bank Bldg., Denver	Gold, Silver
Denver (a)	Georgetown	Metals Tunnel Company	2555 West 37th Ave., Denver	Gold, Silver (c)
Dexter	Idaho Springs	Continental Mines, Inc.	Box 33, Idaho Springs	Gold, Silver, Lead (c)
Diamond Joe (a)	Idaho Springs	American Eagle Gold Mining Company	808 Ninth Street, Greeley	Gold, Silver (c)
Dierks (m)	Idaho Springs	Bruce Consolidated Mining Company	718 17th St., Denver	Gold, Silver (c)
Eagen	Idaho Springs	W. L. Jameson	719 Colorado Bldg., Denver	Gold, Silver
East Lake (a)	Idaho Springs	Clear Creek Gilpin Company	Idaho Springs	Gold, Silver, Lead
Edgar (a)	Idaho Springs	Samuel B. Smith, Edgar Lease	3108 West 121st St., Cleveland, Ohio	Gold, Silver (c)
Edwards	Idaho Springs	United Mines and Finance Company	718 17th St., Denver	Gold, Silver (c)
Elliott Barber (m)	Idaho Springs	Alma Lincoln Mining Company	718 17th St., Denver	Gold, Silver
Empire City (a)	Empire	L. L. Turley	1160 Gaylord St., Denver	Gold, Silver

F. and C.	Idaho Springs	George C. Curnow and Associates	Idaho Springs	Gold, Silver (c)
Floyd Hill	Idaho Springs	Floyd Hill Mines, Inc.	4042 Tennyson St., Denver	Gold
Fulton	Idaho Springs	Cornelius Smith and Associates	Idaho Springs	Gold, Silver
Gold Bug (a)	Empire	The G-B Mine, Inc.	825 First Natl. Bank Bldg., Denver	Gold, Silver
Gold Dirt (m)	Empire	Gold Dirt Mining and Ore Reduction Corporation	Box 157, Littleton	Gold, Silver
Gold Valley	Lawson	Gold Valley Mining and Tunnel Company	2105 W. 47th Ave., Denver	Gold, Silver
Golden Eagle	Empire	P. E. and F. S. Mathews	Empire	Gold
Golden Edge	Idaho Springs	Black Bear Mines, Inc.	Idaho Springs	Gold, Silver
Hammill Tunnel	Silver Plume	J. E. Bennett and Associates	Silver Plume	Gold, Silver, Lead
Headlight	Empire	A. W. Neal	Denver	Gold, Silver
High Five	Georgetown	Argentine Gold Mining Company, J. N. Caldwell	Ferguson Bldg., Denver	Gold, Silver, Copper
Horn Lode	Idaho Springs	Blanche Johnson and J. E. Johnson	Idaho Springs	Gold, Silver
Howard (a)	Empire	George T. Kearns	1822 California St., Denver	Gold, Silver
Humboldt-Mary Foster (a)	Idaho Springs	Humboldt Consolidated Mining Company	304 California Bldg., Denver	Gold, Silver (c)
Kangaroo	Idaho Springs	Kangaroo Mining Company	Idaho Springs	Gold, Silver
Lalla (m)	Idaho Springs	W. G. Harper and S. S. Thompson	Box 446, Idaho Springs	Gold, Silver
Lexington (a)	Idaho Springs	Lexington Syndicate	120 Liberty St., New York City	Gold, Silver (c)
Lincoln Upper Level	Idaho Springs	Tarheel Gold Mining Company	718 17th St., Denver	Gold, Silver, Lead, Copper
Little Champion	Idaho Springs	E. S. Huntington	2250 Dahlia St., Denver	Gold, Silver
Lombard (m)	Idaho Springs	U. S. Gold Reserve, Inc.	628 Majestic Bldg., Denver	Gold, Silver
Lord Byron (a)	Idaho Springs	Humboldt Consolidated Mining Company E. R. Cronk	304 California Bldg., Denver Idaho Springs	Gold, Silver
Lucky Strike	Idaho Springs	Lucky Strike Gold, Inc.	Idaho Springs	Gold, Silver
McClelland Tunnel (a) (m)	Idaho Springs	Montezuma Corporation Boston Gold Mining Company	1 William St., New York City Idaho Springs	Gold, Silver
Mattie (m)	Idaho Springs	Mattie Consolidated Mines, Inc. Midwest Gold Mines, Inc.	715 First Natl. Bank Bldg., Denver 331 First Natl. Bank Bldg., Colorado Springs	Gold, Silver
Maud Monroe	Idaho Springs	Fleeger and Williams	Idaho Springs	Gold, Silver
Metropolitan (a)	Idaho Springs	J. B. Furstenberg	935 St. Paul, Denver	Gold, Silver
Mint	Empire	Henry Nelson	Empire	Gold, Silver
Mount Kelso (a)	Georgetown	Mount Kelso Consolidated Mining Company	Georgetown	Gold, Silver, Lead
Neath	Empire	Gold Horn Mining Company, C. A. Bottinelli	229 Midland Savings Bldg., Denver	Gold, Silver

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OPERATING MINES IN CLEAR CREEK COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
New Hope	Idaho Springs	New Hope Mining and Exploration Company	2105 W. 47th Ave., Denver	Gold, Silver
Ocean Queen	Idaho Springs	W. N. Wilds	600 Boston Bldg., Denver	Gold, Silver
Old Settler	Idaho Springs	Old Settler Mines, Inc.	512 Majestic Bldg., Denver	Gold, Silver
Oregon (a)	Idaho Springs	Ben Owens	Idaho Springs	Gold, Silver
P. T. (m)	Idaho Springs	King Kong Mines, Inc.	210 Tabor Bldg., Denver	Gold, Silver
Payrock and Dunkirk (m)	Silver Plume	Continental Divide Development Company	927 U. S. Natl. Bank Bldg., Denver	Gold, Silver
Princess of India (a)	Lawson	Princess Mines, Inc.	Idaho Springs	Gold, Silver, Lead
Pulaski	Silver Plume	Black Bear Mines, Inc.	Idaho Springs	Gold, Silver
Puzzler (a)	Empire	Sam C. Crawford and Associates	Empire	Gold, Silver
Red Elephant (a) (m)	Lawson	Culford Partnership El Crest Mining Company	Lawson 915 U. S. Natl. Bank Bldg. Denver	Gold, Silver, Lead
Red Jacket	Idaho Springs	M. Moore and R. R. Redington	Idaho Springs	Gold, Silver
Reynolds	Alice	George A. Reynolds	Alice	Gold, Silver
San Juan (a) (m)	Idaho Springs	Beach Brothers	Box 341, Idaho Springs	Gold, Silver
Santiago (m)	Georgetown	Santiago Metals Corporation	311 U. S. Natl. Bank Bldg., Denver	Gold, Silver, Lead
Shafter	Idaho Springs	Shafter Mining Company	1809 E. 18th Ave., Denver	Gold, Silver
Silver Queen (a)	Shawnee	J. F. Kimberley and J. L. Henritzz	Grant	Gold, Silver, Lead Zinc
Specie Payment (a) (m)	Idaho Springs	King Kong Mines, Inc.	210 Tabor Bldg., Denver	Gold, Silver
Standard	Idaho Springs	Standard Gold Mining Company	Idaho Springs	Gold, Silver
Stephens	Idaho Springs	C. A. Noehren and Freres Development Company, Ltd.	Idaho Springs	Gold, Silver, Copper
Sweet Home (a)	Idaho Springs	J. B. Hartman	Box 302, Idaho Springs	Gold, Silver
Tenth Legion	Empire	James Girard	Empire	Gold, Silver
Tolland County (a)	Idaho Springs	Aetna Leasing Corporation	108 VanBuren Ave., West Hartford, Conn.	Gold, Silver, Lead
Tunnel Lode No. 3	Idaho Springs	John Jensen, Lessee	Box 371, Idaho Springs	Gold, Silver
Victor	Idaho Springs	L. W. Sykes Milling Company	Room 811-931 14th St., Denver	Gold, Silver (c)
Wheatland Tunnel	Idaho Springs	Two Sunsets Mines, Inc.	Idaho Springs	Gold, Silver
Wilcox Tunnel (a) (m)	Georgetown	Waldorf Gold, Inc., I. I. Boak	U. S. Natl. Bank Bldg., Denver	Gold, Silver

OPERATING MINES IN CONEJOS COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Mammoth	Platoro	Irving W. Bonbright	1 Wall Street, New York City	Gold, Silver

OPERATING MINES IN CUSTER COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Deceiver (a)	Westcliffe	J. P. Falkenburg and Robert Wolff	Westcliffe	Silver, Lead (c)
Denver Claim (a)	Westcliffe	H. C. Courtney	315 W. Northern St., Pueblo	Silver, Lead
King of the Carbonates	Westcliffe	J. T. Stroehlke and H. R. Henning	Silver Cliff	Silver, Lead
Passiflora (a)	Westcliffe	William Schellerberg	Westcliffe	Silver, Lead
Vulcan Tunnel	Querida	T. M. Howells	Silver Cliff, Querida Star Route	Gold, Silver, Lead

OPERATING MINES IN DELTA COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Sunflower	Austin	P. T. S. Chemical Company	Orange, Tex.	Sulphur

OPERATING MINES IN DOLORES COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Gold Anchor	Rico	F. G. Day	Box 515, Rico	Gold, Silver, Copper, Lead, Zinc
Lucky Boy	Rico	Rico Consolidated Mining Company, % H. R. Tenholm Estate, Provo, Utah	Rico	Lead, Zinc
Pro Patria	Rico	Rico Enterprise Mining Company	Rico	Gold, Silver, Lead, Zinc, Copper
Rico Townsite	Rico	Pelleyre Mining and Milling Company—George S. Hicks	Rico	Lead, Zinc
Wellington	Rico	St. Louis Smelting and Refining Company	722 Chestnut St., St. Louis, Mo.	Lead, Zinc, Copper, Iron

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OPERATING MINES IN EAGLE COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Alligator	Redcliff	Alligator L. and M. Company, Mrs. Anna C. Martin	260 South Corona, Denver	Gold, Silver
Alpine	Redcliff	O. W. Myer	Redcliff	Gold, Silver
Ben Butler	Redcliff	John S. Redford	1067 Gas & Electric Bldg., Denver	Gold, Silver
Black Tiger	Redcliff	J. R. Wight and H. C. Gilley	Colorado Springs	Gold, Silver
Champion	Redcliff	H. H. Wallower	Rosemont, Pennsylvania	Gold, Silver
Eagle	Gilman	Empire Zinc Company	Gilman	Gold, Silver, Lead, Copper
Ground Hog	Redcliff	Battle Mountain Exploration Company, H. H. Wallower	Rosemont, Pennsylvania	Gold, Silver
Potvin	Redcliff	B. D. Price	Minturn	Gold, Silver
Pursey Chester, Mabel, etc.	Gilman	W. M. Wildey and A. L. Moore	Redcliff	
Star of the West and Tip Top	Redcliff	A. J. Clooney	Redcliff	Gold, Silver
Warriors Mark	Redcliff	F. L. Sherwin	Mining Exch. Bldg., Denver	Gold, Silver

OPERATING MINES IN EL PASO COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Portland Dump (m)	Colo. Springs	Mill Tailings Recovery Company	601 N. Chestnut St., Colorado Springs	Gold
Standard Dumps	Colo. Springs	J. L. and B. L. Morrison	Colorado Springs	Gold

OPERATING MINES IN FREMONT COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Dawson City	Canon City	Chas. L. Tutt and L. B. Maytag	222 Mining Exchange Bldg., Colorado Springs	Gold

OPERATING MINES IN GILPIN COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
American Girl (m)	Blackhawk	Gold Center Mining and Milling Company, F. A. Gustafson	Idaho Springs	Gold, Silver
Anchor (m)	Central City	Willis Gulch Mining Company, Roy B. Perry	Box 396, Idaho Springs	Gold, Silver
Atlantic (a)	Blackhawk	Rocky Mountain Engineering Company	230 Wilda Bldg., Denver	Gold, Silver
Arizona-Morning Star	Russell Gulch	Ben T. Owen	Idaho Springs	Gold, Silver
Banty Ranch (a)	Russell Gulch	Robert Hastie and Associates	Idaho Springs	Gold, Silver, Lead (c)

Bates Hunter and Becker (m)	Central City	Gregory Bates Mines Company	Blackhawk	Gold, Silver
Beacon (a)	Rollinsville	Beacon Mining and Milling Company	Rollinsville	Gold, Silver (c)
Bezant (a)	Russell Gulch	Pierce Mining Company	Manchester Road, Wheaton, Ill.	Gold, Silver
Blue Diamond (m) (a)	Blackhawk	Blue Diamond Mines Company, Fred Gade	1010 University Bldg., Denver	Gold, Silver
Bonanza	Central City	Justice Hill Mining Company, Inc.	335 Fifteenth St., Denver	Gold, Silver
Bullion No. 2 (a)	Central City	J. B. Wray Vaughn and Associates	225 U. S. Natl. Bank Bldg., Denver	Gold, Silver, Lead (c)
Chemung Belmont (a)	Central City	Mongone Chemung Belmont Mining Company	Central City	Gold, Silver
Coeur d'Alene (a)	Central City	Coeur d'Alene Mining Company	Central City	Gold, Silver (c)
Columbus	Russell Gulch	Red Arrow Mines, Inc., V. C. Herrin	Idaho Springs	
Copper King and Lilly (a)	Central City	O. A. Garr	3538 Bryant St., Denver	(c)
Druid	Russell Gulch	Hughes-Parsons and Company	Central City	Gold, Silver
Egyptian	Central City	Terminal Gold Mining Company	Box 14, Central City	Gold, Silver (c)
Eldorado (a)	Russell Gulch	Joe Thouvenell and Associates	Portage, Wisconsin	Gold, Silver
Eureka	Central City	Gilpin Eureka Consolidated Mines, Inc.	300 Dwight Bldg., Kansas City, Mo.	Gold, Silver
Federal	Russell Gulch	Diamond K. Mining Corporation	Box 157, Littleton	Gold, Silver
Forfar (a)	Russell Gulch	Forfar Mining Company, W. C. Rea	Empire	Gold, Silver
Gettisburg	Russell Gulch	H. C. Linn	Russell Gulch	Gold, Silver
Gold Basin	Rollinsville	Taylor Abercombie Mining Corporation	Rollinsville	Gold, Silver (c)
Golden Flint	Rollinsville	Albert Pearson	45 Grant St., Denver	Gold, Silver
Hi-Tension (a)	Blackhawk	Hi-Tension Mining and Milling Company	Blackhawk	Gold, Silver
Iron	Russell Gulch	Zancanella and Company	Blackhawk	Gold, Silver
Leidinger (a)	Central City	Leidinger Mines, Inc., Thomas Fallon	Sears Hotel, Denver	Gold, Silver
Mackey (a)	Apex	Walter Davis	℅ Green Hotel, Pasadena, Calif.	Gold, Silver
Margaret Glenen (a) (m)	Blackhawk	Beatrice Gold Mining Company, C. G. Taylor	Central City	Gold, Silver
Metha	Tolland	A. E. Anderson and Ira Smythe	Blackhawk	Gold
Nemeha (a)	Blackhawk	W. L. Dukes and Mike Vranesic	Central City	Gold, Silver
North American (a)	Central City	O. A. Garr	3538 Bryant St., Denver	Gold, Silver (c)
Otte	Blackhawk	Metal Syndicate Tony Zancanello	Russell Gulch	Gold, Silver
Pay Off	Central City	Gold Ridge Mining Company	Central City	Gold, Silver
Perrin (a)	Russell Gulch	Nirrep Mining Company, W. A. Wagner	Idaho Springs	Gold, Silver
Perigo	Rollinsville	Perigo Mines Company	Rollinsville	Gold, Silver
Pewabic	Blackhawk	John C. Fleschhutz	Blackhawk	Gold, Silver

(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN GILPIN COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Pine Comb (a) (m)	Blackhawk	Hy-Gold Mining and Milling Company	Blackhawk	Gold, Silver
Pittsburg (m)	Central City	Russell Gulch Mining Company	530 U. S. Natl. Bank Bldg., Denver	Gold, Silver
Powers	Central City	War Dance Mines, Inc.	Idaho Springs	Gold, Silver
Procunier	Blackhawk	William N. James and Associates	Central City	Gold, Silver
Providence-Newport	Rollinsville	Henry Josephson	Rollinsville	Gold, Silver
Reform (a) (m)	Blackhawk	L. C. Cavnah and Associates	Blackhawk	Gold, Silver
Rialto and East Boston (a)	Central City	Maryland-Colorado Gold Company, G. H. Barnhart	3101 Steele St., Denver	Gold, Silver
Rochester (m)	Blackhawk	Apex Leasing and Development Company	Blackhawk	Gold, Silver
Saratoga (a) (m)	Russell Gulch	Saratoga Gold Corporation, C. H. Harrington	Idaho Springs	Gold, Silver
United Gilpin (m)	Central City	United Gilpin Corporation	2309-100 N. LaSalle St., Chicago, Ill.	Gold, Silver
We Got Em (m)	Blackhawk	Gilpin County Gold Mining Corporation	415 Chamber of Commerce Bldg., Denver	Gold, Silver
West Notaway (a)	Central City	Notaway Mines, Inc.	Central City	Gold, Silver

OPERATING MINES IN GRAND COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Elk Mountain (a)	Kremmling	Elk Mountain Copper Company, N. C. Huffaker	Hot Sulphur Springs	Gold, Silver, Lead, Zinc, Copper (c)
Pioneer Tunnel	West Portal	City and County of Denver	City Hall, Denver	
Wier	Empire	George H. Riggle and Associates	388 South Pearl, Denver	Gold, Silver (c)

OPERATING MINES IN GUNNISON COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Baxter (a)	Gunnison	C. D. McHenry	Gunnison	(c)
Big 4	Iola	J. L. McGruder and J. W. Clendenin	Iola	Silver, Lead (c)
Carter (m)	Ohio	Carter Mines Company	Ohio City	Gold, Silver, Lead
Fairview (a)	Pitkin	Emperius Mining Company	Alamosa	Silver, Lead, Copper (c)
Forest Queen and Ruby Chief	Crested Butte	Ruby Chief Mining Company	Crested Butte	Gold, Silver

Gold Monument	Ohio	James F. Robinson	Ohio City	Gold, Silver, Lead
Golden Comet (a)	Crested Butte	Golden Comet Mines, C. D. McHenry	Gunnison	Gold, Silver, Lead (c)
Gunnison (a)	Iola	Fred H. Brown	Box 303, Gunnison	Gold, Silver (c)
Inez Tunnel (a)	Crystal	Little Inez Mining Company, Inc.	824 Equitable Bldg., Denver	Gold, Silver, Lead, Zinc
Lucky Boy (m)	Gunnison	Lucky Boy Mining Company	Gunnison	Gold, Silver
Lulu Group-Gold Dollar	Gunnison	Elmer and Alfred Turner	Gunnison	Gold, Silver, Lead, Zinc, Copper
Raymond and Cyrus	Pitkin	George A. Norwood and Arthur Pearson	Pitkin	Gold, Silver, Lead
Red Rose Nos. 1, 2, 3	Iola	James Darter and Martin VanVoorhis	Iola	Gold, Silver
Roosevelt	Pitkin	Roosevelt Gold Mines Company	Pitkin	Gold, Silver, Copper (c)
Wayne	Parlin	J. W. Stone	Ohio City	Gold, Silver, Lead

OPERATING MINES IN HINSDALE COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Fannie Fern	Lake City	Eldorado Gold Mining Company	Lake City	Gold, Silver, Lead, Zinc
Gallic-Vulcan	Lake City	Gallic-Vulcan Mining Corporation	Lake City	Gold, Silver, Lead, Zinc, Copper
Golden Wonder	Lake City	William Davies	190 Logan Avenue, Littleton	Silver, Lead
Lucky Discovery	La Plata	Claude R. McKay	Box 14, Durango	Gold, Silver, Lead

OPERATING MINES IN LAKE COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Amity	Leadville	Edward P. Chapman	Leadville	Gold, Silver, Lead, Copper, Zinc
Antelope Tunnel	Leadville	Emmett Irwin and Company	124 West Third St., Leadville	Gold, Silver (c)
Ballard	Leadville	Cal Col Gold Corporation	Leadville	Gold, Silver, Lead, Copper, Zinc
Belle of Granite	Leadville	Burns Mines, Inc. W. F. Burns	Leadville Salida	Gold, Silver, Lead, Copper, Zinc
Big 4 Tunnel	Leadville	Big Four Gold Group, Inc.	1127 Wazee Street, Denver	Gold, Silver
Blanche Shaft	Leadville	John Cortellini and Company	Leadville	Gold, Silver, Lead, Zinc
Chippewa	Leadville	Randall and Maki Lease	707 East Fifth St., Leadville	Gold, Silver, Lead
Climax	Climax	Climax Molybdenum Company	Climax	Molybdenum
Cord	Leadville	Yak Mining, Milling and Tunnel Co.	Leadville	Gold, Silver, Lead, Copper, Zinc
Dinero Tunnel	Leadville	W. D. Leonard and Company	Leadville	Silver, Lead

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OPERATING MINES IN LAKE COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Dolly B. Shaft	Leadville	Jack McCaughan and Company	200 West 7th St., Leadville	Gold, Silver, Lead
Electric Tunnel	Twin Lakes	King Mining Company	Twin Lakes	Gold, Silver
Eliza Tunnel	Leadville	Eliza Leasing Company	Leadville	Lead, Zinc (c)
Eureka	Independence Pass	Eureka Mining Company	Twin Lakes	Gold, Silver
Fanny Rawlings	Leadville	Fanny Rawlings Leasing Company	515 East Sixth St., Leadville	Gold, Silver, Lead
Forbes Tunnel	Leadville	Abel Herkennen Lease	Leadville	Gold, Silver, Lead
Fortune	Leadville	Fortune Gold Mining Company	Leadville	Gold, Silver, Lead, Copper, Zinc
Garbutt	Leadville	Ninsor Mining Corporation	Leadville	Gold
Golden Eagle	Leadville	Golden Eagle Mining Company	Leadville	Gold, Silver, Lead, Copper, Zinc
Highland Mary	Leadville	Highland Mary Lease	620 East Fifth St., Leadville	Gold, Silver, Bismuth
Ibex	Leadville	Ibex Mining Company	Leadville	Gold, Silver, Lead, Copper, Zinc
Jennie June	Leadville	M. and C. Lease, John Cortellini	Leadville	Gold
Lillian	Leadville	James G. Murcray	Leadville	Gold, Silver, Lead, Copper, Zinc
Lovejoy Tunnel (a)	Leadville	Charles Edwards and Associates	201 East Sixth St., Leadville	Gold
Monarch Shaft	Leadville	New Monarch Mining Company	203 West Ninth St., Leadville	Gold, Silver, Lead, Zinc
Mount Champion (a)	Leadville	Mount Champion Leasing Company, John Cortellini	Leadville	Gold, Silver
Ready Cash	Leadville	August Ingwerson	1820 South Acoma, Denver	Gold
Resurrection	Leadville	Zenda Leadville Mining Company	Leadville	Gold, Silver, Lead, Copper, Zinc
Rexall Shaft (2)	Leadville	Ocean Development Syndicate, L. P. Brown	Bank Annex Bldg., Leadville	Gold, Silver, Lead (c)
South Winnie	Leadville	E. L. Brown and Company	620 East Sixth St., Leadville	Gold (c)
Tribune	Leadville	John Cortellini	Leadville	Gold, Silver, Lead, Copper, Zinc
Tucson	Leadville	Jones Lease	Box 604, Leadville	Zinc
Unknown Lease (a)	Leadville	Charles Edwards and Associates	201 East Sixth St., Leadville	Gold
Venir Lease	Leadville	Venir Lease, John Cortellini	Leadville	Gold
Wolftone Dump	Leadville	M. J. Lease	Box 604, Leadville	Zinc

OPERATING MINES IN LA PLATA COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Gold King (m)	Hesperus	La Plata Mines Company, M. S. McCarthy	La Plata	Gold, Silver, Lead, Zinc
Idaho (m) (a)	Durango	La Plata Mountains Gold Mines, Inc.	P. O. Box 31, Durango	Gold, Silver (c)
Kaibab (a)	Durango	La Plata Gold Placers, Inc., R. C. Cunningham	Durango	Gold, Silver (c)
Lucky Moon	Hesperus	Lucky Discovery Gold, Inc.	931 U. S. National Bank Bldg., Denver	Gold, Silver
Lucky Strike	Hesperus	Henry Weigandt and Associates	Tiffany	Gold, Silver, Lead, Copper
May Day (m)	Hesperus	May Day Milling Co., J. A. Wallace	Durango	Gold, Silver
Monarch	Hesperus	La Plata Gold Placers, Inc., R. C. Cunningham	Durango	Gold (c)
Mountain Lily (a)	Hesperus	A. J. and Edward Merritt	Walsenburg	Gold, Silver
Muldoon (a)	Durango	Herman Dalla and Dave Bianchi	Durango	Gold, Silver

OPERATING MINES IN LARIMER COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Carter	Masonville	Carter Mining Co., Carl Erickson	Masonville	Gold
Cash	Eggers	Cash Gold Mining Company, C. D. Biggerstaff	2305 Gaylord St., Denver	Gold, Silver, Lead, Copper
Colorado	Logcabin	Colonial Investment Company, J. L. Nightengale	Logcabin	Gold, Silver
Depression (a)	Bellvue	Cache la Poudre Mining Company, W. E. Lanyon	120 S. Mason St., Ft. Collins	Gold, Silver (c)
Dixie	Logcabin	Dixie Mining Co., W. I. Brooks	608 S. Meldrum St., Ft. Collins	Gold, Silver
Gold Coin (m)	Logcabin	Gold Coin Mining Syndicate, C. M. Gere	1029 W. Oak St., Ft. Collins	Gold (c)
Mason	Masonville	Masonville Mines, Inc., C. U. Harrington	Box 737, Greeley	Gold, Silver
Rockfield	Logcabin	S. A. and W. T. Pendergast	Logcabin	Gold, Silver, Copper
Vagabond	Berthoud	St. Vrain Petroleum Trust, C. C. Jain	Route 2, Berthoud	Gold (c)

(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN MINERAL COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Amethyst	Creede	The Amethyst Lease, W. C. Sloan	Creede	Silver
Commodore	Creede	Withrow Commodore Lease, Inc.	Creede	Silver, Lead
Last Chance, New York, etc.	Creede	Morgan and Sloan	Creede	Silver, Lead
Ochre	Creede	Dwyer Leasing Company	Creede	Silver, Lead
Park Regent	Creede	Creede Mines, Inc., F. E. Wheeler	1130 First National Bank Bldg., Denver	Silver, Lead
Wagon Wheel Gap	Wagon Wheel Gap	Colorado Fuel & Iron Company	Denver	Fluorspar
Wedge (a)	Creede	Wedge Leasing Company, George B. Botsford	Wagon Wheel Gap	Silver, Lead

OPERATING MINES IN MONTEZUMA COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Doyle	Mancos	Hesperus Mining Company	Boatmen's Bank Building, St. Louis, Missouri	Gold
Mills Group	Mancos	Mancos Gold Mining Company	Mancos	Gold
Red Arrow	Mancos	Red Arrow Gold Corporation	Mancos	Gold

OPERATING MINES IN OURAY COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
American Nettie	Ouray	F. O. Withrow and Wm. McCullough	Ouray	Gold, Silver
Calliope (m)	Ouray	B. P. Bailey Lease	Acme Life, Inc., Austin, Texas	Gold, Silver, Lead, Copper, Zinc
Camp Bird (m)	Ouray	Camp Bird Limited, J. B. Glasser, Agent King Lease, Charles N. Bell	Colorado National Bank Bldg., Denver Ouray	Gold, Silver
Governor	Ouray	Earl A. Alexander and J. W. Sowers	Ouray	Gold, Silver
Ida L. Group (a)	Ouray	Blue Eagle Mining Co., H. A. Larson	Ouray	Gold, Silver, Lead, Copper, Zinc
Mineral Farm	Ouray	Mineral Farm Mines	917 Jefferson Bldg., Peoria, Ill.	(c)
Pony Express (m)	Ouray	G. A. Franz	Ouray	Gold, Silver, Lead, Zinc
Revenue Tunnel	Ouray	Revenue Development Corporation, J. W. Belcoe	Ouray	Gold, Silver, Lead, Copper
Trust Ruby	Ouray	New Trust Ruby Mining and Milling Company, David S. Boyd, Agent	Ouray	Gold, Silver, Lead, Zinc
Wanakah	Ouray	Risch and Fennan	Ouray	Gold, Silver

OPERATING MINES IN PARK COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
American Tunnel	Alma	W. A. Ellis, Inc.	216 Majestic Building, Denver	Gold, Silver
Bridal Chamber	Alma	West London Mines Company	502 California Bldg., Denver	Gold, Silver
Briscoe	Alma	Benjamin Briscoe	Fairplay	Gold, Silver
Butte	Alma	London-Butte Gold Mines Company	529 Equitable Bldg., Denver	Gold, Silver
Columbia (a)	Alma	E. J. McCluskey	Sterling	Gold, Silver
Dauser	Alma	Dee Clark	Box 71, Alma	Gold, Silver
Discovery No. 1	Alma	A. I. Sandusky	Alma	Gold, Silver (c)
Funston and Lucky Strike	Alma	Happy Five Mining Co., C. C. Fine	1940 Broadway, Denver	Gold, Silver, Lead
Hock Hocking (a)	Fairplay	Argentine Gold Mining Company, J. W. Caldwell	1600 Hudson St., Denver	Gold, Silver, Lead
Iowa	Alma	Sonny Boy Mines, Inc.	Box 121, Alma	Gold, Silver
Kentucky Bell (a)	Alma	Summit Mines Company	932 Equitable Bldg., Denver	Gold, Silver, Lead, Copper
London Mine (m)	Alma	London Gold Mines Company	504 Mining Exchange Bldg., Colorado Springs	Gold, Silver
Magnolia (m) (a)	Alma	Magnolia Gold Mines, Inc., W. B. Pattison	Fairplay	Gold
Mascot Tunnel	Alma	Newbonnet Mines, Inc., J. P. Briscoe	Fairplay	Gold, Silver (c)
Mountain Queen	Alma	Mount Queen Gold Mining Co.	2130 E. 14th Ave., Denver	Gold, Silver (c)
North London (m)	Alma	Fairplay Gold Mines, Inc., J. P. Briscoe	Fairplay	Gold, Silver
Oliver Twist (m) (a)	Alma	London Mountain Gold Mines Co.	Continental Oil Bldg., Denver	Gold, Silver
One Lung and Silver Wave (m)	Alma	Alma Mining Company	716 Symes Bldg., Denver	Gold, Silver
Ophir	Alma	M. B. Burke and Associates	301 Humboldt St., Denver	Gold, Silver
Orphan Boy (a)	Alma	Colorado National Gold, Inc.	335 First National Bank Bldg., Colorado Springs	Gold, Silver, Lead
Paris (m)	Alma	Alma Gold Corporation	1203 First National Bank Bldg., Denver	Gold, Silver
Phillips (a)	Alma	2-3-4 Mines, Inc., Ross E. Parker	Fairplay	Gold, Silver
Prince Albert	Alma	H. R. Ranspot	Alma	Gold, Silver
Red Lion and St. Charles (a)	Alma	Hugh Krosinski and Bert Hanscom	Alma	Silver, Lead
Susquehanna	Alma	Susquehanna Gold Mining Company, Harry Johnson	828 E. Colfax Ave., Denver	Gold, Silver
Wyandotte (a)	Alma	Wyandotte Apex Gold Mining Co.	305 Empire Bldg., Denver	Gold, Silver (c)

(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN PITKIN COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Colorado Duluth	Aspen	Colorado Duluth Mining Company, D. P. Rohlfing	Aspen	Silver, Lead
Eureka	Aspen	Eureka Mines, Inc.	Aspen	Silver, Lead (c)
Highland Tunnel (a)	Aspen	Highland Mines, Inc.	Aspen	Silver, Lead (c)
Hope Tunnel (m)	Aspen	John L. and William Herron	Aspen	Silver, Lead
Midnight (m)	Aspen	Midnight Mining Company	Aspen	Silver, Lead, Zinc
Porphyry Mountain	Meredith	Porphyry Mountain Gold Mines Co.	Aspen	Silver, Lead (c)
Slide Tunnel	Aspen	Amos Bourquin	Aspen	Silver, Lead (c)

OPERATING MINES IN RIO GRANDE COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Summitville Consolidated	Summitville	Summitville Mines Corporation	1555 Sherman St., Denver	Gold

OPERATING MINES IN ROUTT COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Elkhorn	Columbine	Rocky Mountain Engineering Co.	230 Wilda Bldg., Denver	Gold, Silver, Lead, Zinc
Master Key	Columbine	Primary Industries Corporation	342 Madison Ave., New York City	Gold, Silver, Copper
Royal Flush	Columbine	Hahns Peak Gold Mining and Milling Company	Room 3, Algoma Bldg., Oshkosh, Wisconsin	Gold, Silver, Lead, Zinc, Copper (c)
Tom Thumb	Columbine	Tom Thumb Lease, Charles Leckenby and Associates	Steamboat Springs	Gold, Silver (c)

OPERATING MINES IN SAGUACHE COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Crestone (m)	Crestone	Luis Maria Baca Mining and Development Company	Crestone	Gold, Silver
Independent (m)	Crestone	Luis Maria Baca Mining and Development Company	529 Equitable Bldg., Denver	Gold, Silver, Lead, Zinc

Josie K.	Del Norte	Josie K. Folsom Mining and Milling Company	4280 A. Holly Ave., St. Louis, Missouri	Gold, Silver (c)
Maid of Orleans, etc.	Mineral Hot Springs	Erwin Tobler	Mineral Hot Springs	Gold, Silver
Pershing	Villa Grove	Dickson Mining Company	Villa Grove	Manganese
Rawley No. 3	Bonanza	C. E. Bennett	Bonanza	Silver, Lead
Reed Claim No. 1	Crestone	Triple T. Mining Company, Inc.	Crestone	Gold (c)
Shale	Crestone	Alpine Mining and Milling Company	Crestone	Gold (c)
Turquoise (a)	Villa Grove	A. J. Hall	Villa Grove	Turquoise
Whale (a)	Bonanza	W. B. Thompson	Alamosa	Silver, Lead

OPERATING MINES IN SAN JUAN COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Alethea Group	Silverton	Mystery Gold Mining Company	426 U. S. National Bank Bldg., Denver	Gold, Silver, Lead, Copper
Brooklyn	Silverton	J. E. Carney and Associates	Box 524, Ouray	Gold, Silver, Lead, Copper
Ezra R.	Silverton	A. and M. Mining Company	Silverton	Gold, Silver, Lead, Copper
Fredarika	Eureka	Bert Aby	Silverton	Gold, Silver, Lead, Copper
Highland Mary and Old Shenandoah (m) (a)	Silverton	Highland Mary Mines, Inc.	926 Patterson Bldg., Denver	Silver, Lead, Copper (c)
Little Fanny	Silverton	John Gilheany	Silverton	Gold, Silver, Lead, Copper, Zinc
Maybell (m) (a)	Silverton	San Juan Mining Company	418 Flynn Building, Des Moines, Iowa	Gold, Silver, Lead, Copper
North Star (m)	Silverton	North Star Sultan Mining Company	426 U. S. National Bank Bldg., Denver	Gold, Silver, Lead, Copper
Old Hundred (m)	Silverton	Old Hundred Gold Mining Company	Thistle Building, Sisterville, West Virginia	Gold, Silver, Lead, Copper
Old Lout	Ouray	Charles W. Jordan	Leadville	Gold, Silver, Lead (c)
Pride of West	Silverton	Pride of West, Inc.	1716 California St., Denver	Gold, Silver, Lead, Zinc
Shenandoah-Dives (m)	Silverton	Shenandoah-Dives Mining Company	1000 Grand Avenue Temple, Kansas City, Missouri	Gold, Silver, Lead, Copper
Yukon Tunnel	Silverton	Gold Hub Mines Company	520 Denham Bldg., Denver	Gold, Silver, Lead, Zinc

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(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN SAN MIGUEL COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Alta	Telluride	J. M. Wagner	Telluride	Gold, Silver, Lead
Atlas	Telluride	Charles Fossen	Telluride	Gold, Silver, Lead
Black Bear and Iona (a)	Telluride	Telluride Black Bear Mines, Inc.	554 Equitable Bldg., Denver	(c)
Carribeau	Telluride	A. J. Knoefler	Telluride	Gold, Silver, Lead
Dividend	Telluride	The Dividend Mining Company	1020 First National Bank Bldg., Denver	Gold, Silver
Grace	Telluride	Frank Dalle	Telluride	Gold, Silver, Lead
La Junta	Telluride	I. J. McDonald	Telluride	Gold, Silver, Lead
Mammoth (m)	Telluride	The Maryland Mines Company, Inc., Charles A. Fairlamb	Telluride	Gold, Silver
Nellie and Laura (m)	Telluride	Paul Nardin	Telluride	Gold, Silver
Polar	Vanadium	G. H. Ross	Cedar	Vanadium
Savage (m)	Telluride	J. G. Silvey and Associates	1129 5th St., Greeley	Gold
Silver Pick	Telluride	George G. Wagner	Telluride	Gold, Silver, Lead
Smuggler-Union (m)	Telluride	Telluride Holding Corporation	909 Equitable Bldg., Denver	Gold, Silver, Lead
Unaweep	Fall Creek	Unaweep Mining Company	Box 629, Denver	Gold (c)
Upper-Lower-Middle (m)	Cedar	North Continent Mines, Inc.	Room 1210, First National Bank Bldg., Denver	Gold, Silver, Lead, Zinc
Wasatch	Telluride	Lee Bennett	Telluride	Gold

OPERATING MINES IN SUMMIT COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Arctic	Breckenridge	Polarctic Mining Corporation, J. L. Moran	Breckenridge	Gold, Silver
Atlantic and Pacific (m)	Breckenridge	Atlantic and Pacific Corporation	18 Cherry Street, Douglaston, New York	Gold, Silver
Blue Flag	Breckenridge	George Robinson	Breckenridge	Gold, Silver, Lead
Blue River	Breckenridge	Arctic Gold Mining Company	512 Equitable Bldg., Denver	Gold, Silver
Blue Sapphire	Breckenridge	Mrs. Arthur Munn and Hugh Higham	Breckenridge	Gold, Silver
Boston	Kokomo	Boston Gold Mining Company, C. W. Fisk	Idaho Springs	Gold, Silver, Lead
Bullion	Montezuma	Golden Cycle Corporation	Golden Cycle Bldg., Colorado Springs	Gold, Silver, Lead, Copper
Cabinet Group (a)	Kokomo	C. M. Vermillion and Paul Laverents	Kokomo	Silver, Lead (c)
Carbonate (m)	Breckenridge	North American Exploration Mining and Milling Company	Breckenridge	Gold, Silver
Congress	Tiger	Congress Mining Company, E. P. Moe	Breckenridge	Gold, Silver
Diamond Jack (a)	Breckenridge	Robert A. Cook and Associates	564 Adams St., Denver	Gold, Silver (c)

Excelsior	Frisco	H. L. Briggs	Dillon	Gold, Silver
Fredonia	Breckenridge	Robert M. Wheeler, Agent	Box 378, Durango	Silver, Lead
Frisco	Frisco	Frisco Mining and Milling Company	616 Denham Building, Denver	Gold, Silver
Gold Crest (a)	Kokomo	Gold Crest Mining Company	905 13th Street, Golden	Gold, Silver
Golden Beaver	Breckenridge	Golden Beaver Mine	2410 1st Ave., Seattle, Wash.	Gold, Silver (c)
Governor (a)	Breckenridge	Governor Leasing Company	Breckenridge	Gold, Silver, Lead (c)
Jerry Tunnel	Montezuma	Florado Mining Company	925 U. S. National Bank Bldg., Denver	Gold, Silver, Lead
Jessie	Breckenridge	Royal Tiger Mines Company	Breckenridge	Gold, Silver
Jumbo	Breckenridge	Jumbo Properties, Inc.	708 Colorado Building, Denver	Gold, Silver, Lead
Last Dollar	Breckenridge	Frank Greco and Amie Blanc	Breckenridge	Gold, Silver (c)
New York and Viola (a)	Breckenridge	Breckenridge Gold Mining Corporation	721 Cooper Building, Denver	Gold, Silver (c)
Owl and New York (a)	Breckenridge	Bear Mining and Milling Company	Breckenridge	Gold, Silver (c)
Payrock	Kokomo	Richard Bryant and Associates	Leadville	Gold, Silver, Lead
Peggy	Tiger	Swan River Mining Corporation	Lewis Tower Bldg., Philadelphia, Pa.	Gold, Silver (c)
Pilot	Montezuma	George Robinson	Breckenridge	Gold, Silver, Lead (c)
Rothchilds Tunnel	Montezuma	Andy Seltenaich and Steve Nankarvis	Idaho Springs	Gold, Silver
Saint John-Jerry Tunnel	Montezuma	Florado Mining Company, F. R. Wolfle	925 U. S. National Bank Bldg., Denver	Gold, Silver, Lead
Tip Top	Montezuma	Tra-Dollar Metal Mines Company	1047 Josephine Street, Denver	Gold, Silver (c)
Wintergreen, Delaware and Bledsoe	Kokomo	Walter Byron and Associates	500 E. and C. Bldg., Denver	Gold, Silver

OPERATING MINES IN TELLER COUNTY, 1935

Name of Mine	Location	Operator	P. O. Address	Character of Product
Acacia	Victor	Acacia Gold Mining Company	716 North Wahsatch Avenue, Colorado Springs	Gold
Ada Bell	Cripple Creek	Adabell Gold Mining Company, John T. Milliken	Cripple Creek	Gold
Ajax	Victor	Golden Cycle Corporation—Ajax Operation	Colorado Springs	Gold
Alhambra	Victor	Tri-City Mining Association	Victor	Gold
Alamo-Rittenhouse	Cripple Creek	Frank D. Doepke and Associates	Box 36, Colorado Springs	Gold
Amanda	Victor	Carl F. H. Krug	2718 Woodburn Ave., Cincinnati, Ohio	Gold
Anchoria Leland (a)	Cripple Creek	Golden Cycle Corporation	Golden Cycle Building, Colorado Springs	Gold
Anna J.	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold
Atlanta	Independence	Atlanta Mining Company	Box 308, Salina, Kansas	Gold
Bebee Shaft of Pueblo Claim	Victor	E. H. Siney	Cripple Creek	Gold
Ben Hur	Cripple Creek	John E. Phillips	403 South Garfield Avenue, Alhambra, Calif.	Gold

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(a) Operated for part of the year only. (c) No production reported in 1935. (m) Mill operated in connection with mine.

OPERATING MINES IN TELLER COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Block 8 (School Section)	Victor	The Reba-Lee Mining Company	33 Independence Bldg., Colorado Springs	Gold
Blue Bell	Cripple Creek	Triad Mining Corporation	1907 Grand Avenue, Kansas City, Missouri	Gold
Bogart Blue Flag (a)	Cripple Creek	El Crest Mining Company	915 U. S. National Bank Building, Denver	Gold
Bonanza Group	Independence	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Buckeye	Cripple Creek	Buckeye Mines and Milling Company	66 Independence Bldg., Colorado Springs	Gold
C. K & N (a)	Cripple Creek	Mrs. Anna R. Wilder	Cripple Creek	Gold
C. O. D.	Cripple Creek	F. E. Wilson	Cripple Creek	Gold
Cameron Townsite	Cripple Creek	Cameron Gold Mines, Inc.	507 Empire Building, Denver	Gold
Cardinal Tunnel	Cripple Creek	Cripple Creek Royalties Company	Box 118, Lincoln, Nebraska	Gold
Colorado City	Victor	Colorao Gold, Inc.	Cripple Creek	Gold
Commonwealth	Cripple Creek	Commonwealth Gold, Inc.	Victor	Gold
Conundrum (a)	Cripple Creek	The Conundrum Syndicate	Cripple Creek	Gold (c)
Cresson	Cripple Creek	Cresson Consolidated Gold Mining and Milling Company	Box 86, Colorado Springs	Gold
Damon	Cripple Creek	Jerry Johnson Gold, Inc.	Cripple Creek	Gold
Dante	Victor	Cresson Consolidated Gold Mining and Milling Company	Box 86, Colorado Springs	Gold
Dead Horse	Cripple Creek	Mrs. Leon F. LeBrun	Cripple Creek	Gold
Deadwood Group	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold
Delmonico (North End)	Victor	Smith, Siney and Denny	118 South Cascade, Colorado Springs	Gold
Dexter Shaft No. 2	Victor	Hamlet-Dexter Gold Mines Corp.	Cripple Creek	Gold
Doctor Jack Pot	Cripple Creek	Doctor Jack Pot Mining Company	349 E. Bennett Avenue, Cripple Creek	Gold
El Crest	Cripple Creek	El Crest Mining Company	915 United States National Bank Building, Denver	Gold (c)
Eldredge Group (a)	Cripple Creek	Mrs. Emma Eldredge	18 E. Willamette, Colorado Springs	Gold
Elkton	Cripple Creek	The Elkton Company	Golden Cycle Bldg., Colorado Springs	Gold
Ella W.	Cripple Creek	Ella W. Syndicate, A. H. Danford	1714 Lawrence Street, Denver	Gold (c)
Ellis	Rhyolite Mountain	A. V. Mining Company	Box 438, La Junta	Gold
El Paso	Beacon Hill	Hidalgo Gold Mines, Inc.	520 U. S. National Bank Building, Denver	Gold
Favorite Shaft	Victor	Stratton Cripple Creek Mining and Development Company	Cripple Creek	Gold
Findley Dump	Independence	United Gold Mines Company	Box 86, Colorado Springs	Gold
Forest Queen	Cripple Creek	A. L. Anderson and C. O. Johnson	Cripple Creek	Gold

Free Coinage	Cripple Creek	Free Coinage Gold Mining Company	716 North Wahsatch, Colorado Springs	Gold
Gillette Mine Dump	Gillette	Cripple Creek Trading and Mining Co.	Box 36, Colorado Springs	Gold
Globe Shaft	Winfield	Stratton Cripple Creek Mining and Development Company	Cripple Creek	Gold
Gold Bond	Cripple Creek	C. R. Slusser, Trustee	515 Kittredge Bldg., Denver	Gold
Gold Coin	Victor	W. D. Wade and Company	Victor	Gold
Gold Dollar	Cripple Creek	New Gold Dollar Mining Company	Box 86, Colorado Springs	Gold
Gold King	Cripple Creek	Hildreth Frost	Box 36, Colorado Springs	Gold
Gold Sovereign	Victor	Cresson Consolidated Gold Mining and Milling Company	Box 86, Colorado Springs	Gold
Golden Wedge	Cripple Creek	Milton Smith and Associates	Denver	Gold
Good Will Tunnel	Cripple Creek	Hildreth Frost	Box 36, Colorado Springs	Gold
Grace Greenwood	Gold Hill	LeClair Consolidated Mines Company	Box 186, Colorado Springs	Gold
Hardwood Group	Victor	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
Harrington Shaft	Victor	E. D. Scott and Henry W. Harrington	Victor	Gold
Henry Adney and Mary Nevin Dumps	Cripple Creek	The Adney Gold Mining Company	1511 No. Tejon Street, Colorado Springs	Gold
Hiawatha	Cripple Creek	Hiawatha Leasing Company	Box 36, Colorado Springs	Gold
Hill Top	Cripple Creek	Mrs. Mary Dean Reed	1010 First National Bank Bldg., Denver	Gold (c)
Hull City	Independence	United Gold Mines Company	Box 86, Colorado Springs	Gold
Index (a)	Cripple Creek	Gold Mines Consolidated, Inc.	316 C. A. Johnson Building, Denver	Gold
Ironclad	Cripple Creek	Thos. Kavanaugh	Cripple Creek	Gold
Isabella	Victor	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
Jerry Johnson	Cripple Creek	Jerry Johnson Gold, Inc.	Cripple Creek	Gold
Jo Dandy	Victor	New Zealand Gold Mines, Inc.	Box 212, Manitou	Gold
John A. Logan	Bull Hill	International Gold Producers, Inc., C. E. Bevens	817 17th Street, Denver	Gold
Katinka	Cripple Creek	Unity Gold Corporation, Evan J. Williams	Cripple Creek	Gold
Langstaff Shaft on Pueblo Claim	Victor	Free Coinage Gold Mining Company, Kenneth Mackenzie	716 North Wahsatch, Colorado Springs	Gold
Last Dollar	Victor	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
Little Alice	Elkton	Sarah H. Joslyn, % O. L. Farnsworth	2218 Dodge Street, Omaha, Nebraska	Gold
Little Fauntleroy	Cripple Creek	R. C. C. Gold Mining Company	1010 First National Bank Building, Denver	Gold

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(a) Operated for part of the year only. (c) No production reported in 1935.

OPERATING MINES IN TELLER COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Londonderry Group	Victor	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
Lone Pine Tunnel (a)	Mineral Hill	Lone Pine Gold Mining Company	205 Pueblo Savings & Trust Building, Pueblo	Gold (c)
Los Angeles Shaft (a)	Victor	Tennessee Mines, Inc.	714 Equitable Building, Denver	Gold
Lower Deadwood	Independence	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
May B.	Victor	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
May Queen Fraction and Blocks 68, 69 (a)	Globe Hill	Thurlin and Broomhall	Cripple Creek	Gold
Midget	Cripple Creek	Atlas Gold Mines Company	Box 25, Cripple Creek	Gold
Moffat Tunnel Dump	Cripple Creek	Hildreth Frost	Box 36, Colorado Springs	Gold
Mollie Kathleen	Cripple Creek	Perry Gortner	210 Bennett Ave., Cripple Creek	Gold
Moon Anchor	Gold Hill	Golden Conqueror Mines, Inc., Benson and Company	Cripple Creek	Gold
Moose and Bertha B.	Cripple Creek	Moose Mines Operations, Inc., F. J. Busch	Cripple Creek	Gold
Net Egg Claim (a)	Cripple Creek	J. J. Elmore	Box 51, Cripple Creek	Gold (c)
Nightingale	Victor	Nightingale Gold, Inc.	404 U. S. National Bank Building, Denver	Gold
North End Ajax	Victor	Premium Gold Mining Company	1005 First National Bank Building, Denver	Gold
North Star (a)	Globe Hill	Trodahl and Associates	Cripple Creek	Gold
Ocean Wave	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold
Old Gold Tunnel	Cripple Creek	Hidalgo Gold Mines, Inc.	520 U. S. National Bank Building, Denver	Gold
Ophir	Cripple Creek	Hildreth Frost	Box 36, Colorado Springs	Gold
Pauper	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold
Pharmacist	Cripple Creek	Pharmacist Gold Mining Company	Golden Cycle Bldg., Colorado Springs	Gold
Pinnacle and Cameron Townsite	Victor	Cameron Gold Mines, Inc.	507 Empire Building, Denver	Gold
Plutocrat	Cripple Creek	A. F. Woodward	520 U. S. National Bank Building, Denver	Gold
Portland	Victor	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
Pride of Cripple Creek	Cripple Creek	Pride of Cripple Creek Gold Mining Company, Perry N. Moore	1331 East 17th Avenue, Denver	Gold

Prince Albert Tunnel	Victor	London Extension Mining Company	1101 South Gaylord St., Denver	Gold
Proper Claim Blocks 99-100, 1-6-7-8-9	Cripple Creek	Golden Globe Mining Corporation	Cripple Creek	Gold
Proper Claim Blocks 97-98	Cripple Creek	Lucky Seventh Sub.	Cripple Creek	Gold
Puzzle (a)	Cripple Creek	M. Goldstein Estate, Guy R. Harkness, Agent	316 C. A. Johnson Bldg., Denver	Gold
Queen (a)	Cripple Creek	Queen Leasing Company	Mercantile-Commerce Bank and Trust Co., St. Louis, Mo.	Gold
Queen Bess	Cripple Creek	Queen Bess Mining Company, Hahnewald and Gortner	Cripple Creek	Gold
Ramona	Cripple Creek	Ramona Mines Company	610 First National Bank Building, Denver	Gold
Rigi	Victor	Detroit-Cripple Creek Gold Mining Company	439 Penobscot Bldg., Detroit, Mich.	Gold
Rittenhouse Shaft	Gold Hill	Rittenhouse Mines, Incorporated	Box 36, Colorado Springs	Gold
Roman Savage	Cripple Creek	James Owen	First National Bank Building, Denver	Gold
Rose Nicol	Cripple Creek	United Gold Mines Company	Golden Cycle Bldg., Colorado Springs	Gold
Ruby	Cripple Creek	R. A. Dooley	Box 183, Cripple Creek	Gold
Sangre de Cristo	Cripple Creek	Isis Gold Mining Company, William O'Brien	Manitou Baths, Manitou	Gold
Santa Rita (a)	Victor	Santa Rita Mines Corporation, E. P. Arthur, Jr.	Cripple Creek	Gold
Santa Rita No. 2 (a)	Victor	Santa Rita Mines Corporation, E. P. Arthur, Jr.	Cripple Creek	Gold
Sheriff	Cripple Creek	Stanford Snyder	Cripple Creek	Gold
Shurtloff Dump	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold
Solomon	Midway	United Gold Mines Company	Box 86, Colorado Springs	Gold
Specimen Mountain	Victor	Thomas and Beilz	Cripple Creek	Gold
Stratton	Victor	Stratton Cripple Creek Mining and Development Company	Independence Building, Colorado Springs	Gold
Stratton's Independence	Victor	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Strong	Victor	The Strong Mining Company, W. L. Kirkwood	Colorado Springs	Gold
Tateman Shaft	Victor	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Teller County	Cripple Creek	Stone Brothers	Cripple Creek,	Gold
Theresa Shaft	Victor	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold

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(a) Operated for part of the year only. (c) No production reported in 1935.

OPERATING MINES IN TELLER COUNTY, 1935—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Trail Tunnel	Cripple Creek	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Upper Granite	Victor	Golden Cycle Corporation	Box 86, Colorado Springs	Gold
Victor	Victor	Hidalgo Gold Mines, Incorporated	520 U. S. National Bank Bldg., Denver	Gold
Vindicator	Victor	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Vulcan	Cripple Creek	James Clifford and Henry Hartman	Cripple Creek	Gold
W. P. H. Group	Cripple Creek	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Wagner	Mineral Hill	J. C. and Mrs. Ida Wagner	Cripple Creek	Gold
Wild Horse No. 1 Shaft	Victor	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Wild Horse (Gleason Shaft)	Victor	United Gold Mines Company	Golden Cycle Building, Colorado Springs	Gold
Yellow Bird and Cotton Tail	Cripple Creek	Bert Burgstrom and Robert Johnson	Cripple Creek	Gold

OPERATING QUARRIES AND CLAY PITS, 1935

Town	County	Name	Product	Operator	Address
Lyons	Boulder	St. Vrain Red	Sandstone	St. Vrain Quarries, J. C. Brodie	3631 Eliot St., Denver
Monarch	Chaffee	Colorado Fuel & Iron	Limestone	Colorado Fuel & Iron Co.	Denver
Salida	Chaffee	Bowen	Granite	Lee Covey and Associates	Salida
Salida	Chaffee	Salida	Granite	Salida Granite Corporation	Salida
Salida	Chaffee	Warner	Granite	James N. Warner	321 West Fifth St., Salida
Castle Rock	Douglas	Castle Rock City Clay	Plastic Clay	A. C. Nipko	Castle Rock
Littleton	Douglas	Helmer	Fire Clay	T. L. and George Helmer	Box 94, Littleton
Littleton	Douglas	Helmer	Limestone	T. L. and George Helmer	Box 94, Littleton
Littleton	Douglas	Helmer	Red Clay	T. L. and George Helmer	Box 94, Littleton
Littleton	Douglas	Helmer	White Sand	T. L. and George Helmer	Box 94, Littleton
Castle Rock	Douglas	Johnson	Plastic Clay	H. G. Johnson	Castle Rock
Manitou	El Paso	Black Canon	Limestone	Thomas & Brown Lime Co.	831 Bradford, Pueblo
Husted	El Paso	Husted	Silica Clay	Standard Fire Brick Co.	Box 654, Pueblo
Colo. Springs	El Paso	Lennox Breed	Limestone	Holly Sugar Corporation	115 No. 23rd, Colorado Springs
Manitou	El Paso	Western Lime Rock	Limestone	Thomas & Brown Lime Co.	831 Bradford, Pueblo
Colo. Springs	El Paso	Woody Placer	Limestone	Thomas & Brown Lime Co.	831 Bradford, Pueblo
Canon City	Fremont	Burnito	Ganister, Sandstone	S. Vernon St. John	1130 Macon Ave., Canon City
Canon City	Fremont	Climax Placer	Fire Clay	Diamond Fire Brick Co.	Canon City
Texas Creek and Oak Creek	Fremont	Coleman Pink and Oak Creek	Granite	V. D. Coleman Granite Co.	1025 No. Cedar, Colo. Springs
Canon City	Fremont	Colonna Marble Plant	Marble, Terrazzo	Colonna & Co. of Colorado, Inc.	Box 387, Canon City
Portland	Fremont	Colorado Portland	Limestone	Colorado Portland Cement Co.	Denver Natl. Bldg., Denver
Canon City	Fremont	Diamond Fire Clay	Fire Clay	Diamond Fire Brick Co.	Canon City
Canon City	Fremont	Flint	Fire Clay	Diamond Fire Brick Co.	Canon City
Canon City	Fremont	Four Mile and H. Rock	Silica	Diamond Fire Brick Co.	Canon City
Coaldale	Fremont	Gypsum	Gypsum	Colorado Portland Cement Co. T. A. Gilray	Denver Natl. Bldg., Denver Coaldale
Canon City	Fremont	Myra	Fire Clay	Diamond Fire Brick Co.	Canon City
Wellsville	Fremont	Rogers	Limestone	George R. Rogers Limerock Co.	648 H St., Salida
Texas Creek	Fremont	Rose Pink	Granite	Salida Granite Corporation	Salida
Canon City	Fremont	Stanko Feldspar	Feldspar and Mica	Ralph H. Magnuson	1333 W. Maple, Denver
Canon City	Fremont	Swastika	Fire Clay	Diamond Fire Brick Co.	Canon City

OPERATING QUARRIES AND CLAY PITS, 1935—Continued

Town	County	Name	Product	Operator	Address
Wellsville	Fremont	Wallen	Limestone	Limerock Co., Inc., Frank H. Norberg	979 Madison St., Denver
Canon City	Fremont	Zingheim's Devil's Hole	Feldspar, Mica, Beryl	E. E. Zingheim	Box 558, Route I, Canon City
Glenwood Springs	Garfield	Glenwood Springs	Limestone	Holly Sugar Corporation	Colorado Springs
Marble	Gunnison	Yule Colorado	Marble	Yule Colorado Marble Co., C. F. Haselton	Marble
Pueblo	Huerfano and Pueblo	Chamblin	Fire Clay	Standard Fire Brick Co.	Box 654, Pueblo
Golden	Jefferson	Coors Clay and Porcelain	Plastic Clay	Coors Porcelain Co.	Golden
South Platte	Jefferson	Crystal No. 4	Feldspar	Ralph H. Magnuson	1333 W. Maple, Denver
Golden	Jefferson	Denver Fire Clay	Fire Clay	Denver Fire Clay Co.	Box 1107, Denver
Golden	Jefferson	Fire Clay	Fire Clay (Apex)	Grant Parfet	Box 226, Golden
Golden	Jefferson	Fire Clay and Brick Plant	Fire Clay	Grant Parfet	Linder Block, Golden
Golden	Jefferson	Golden Clay	Fire and Plastic Clay	Golden Clay Mining Co.	Box 292, Golden
Golden	Jefferson	Johnson Clay	Fire Clay	W. A. Johnson	4045 Lowell Blvd., Denver
Golden	Jefferson	Lindsay Clay	Plastic Clay	Denver Fire Brick Co.	31st and Blake St., Denver
Golden	Jefferson	Moffet Clay	Fire Clay	Grant Parfet	Linder Block, Golden
Golden	Jefferson	Rockwell Clay	Plastic Clay	George W. Parfet Estate, Inc.	Linder Block, Golden
Golden	Jefferson	Rubey Clay	Plastic Clay	H. M. Rubey Clay Co.	Linder Block, Golden
Golden	Jefferson	State Industrial School	Plastic Clay	Grant Parfet	Box 266, Golden
South Platte	Jefferson	Vergie No. 2	Feldspar	Ralph H. Magnuson	1333 W. Maple, Denver
Laporte	Larimer	Boettcher Cement	Limestone	Colorado Portland Cement Co.	Denver Natl. Bldg., Denver
Laporte	Larimer	Clark	Limestone	Clark Quarries, Inc.	Box 503, Fort Collins
Laporte	Larimer	Gypsum	Gypsum	S. H. Roberts and Associates	Laporte
Bellvue	Larimer	Josefson	Limestone	John and Victor Josefson	Bellvue
Loveland	Larimer	U. S. Gypsum	Gypsum	United States Gypsum Co.	300 W. Adams St., Chicago, Ill.
Creede	Mineral	Ultimate Tunnel No. 1	Clay	Peerless Clay and Mineral Co.	First Natl. Bank Bldg., Denver
La Junta	Otero	Buff Shale	Shale	La Junta Clay Products, Inc.	La Junta
La Junta	Otero	LaJunta Shale and Brick Plant	Shale	La Junta Clay Products, Inc.	La Junta
Beulah	Pueblo	Beulah	Limestone	Frank H. Norberg, Inc.	979 Madison St., Denver
Stone City	Pueblo	Nellie Helen Clay	Fire Clay	State of Colorado	State Land Board, State Capitol, Denver
Stone City	Pueblo	Stephens Gypsum	Gypsum	The Thomas & Brown Lime Co.	9th and Bradford Sts., Pueblo
Pueblo	Pueblo	Stone City Clay	Fire Clay	Pueblo Clay Products Co.	9th and Bradford Sts., Pueblo
Pueblo	Pueblo	Summit Pressed Brick	Clay and Shale	Summit Pressed Brick and Tile Co.	13th and Erie, Pueblo
Mustang	Pueblo	Vulcan	Fire Clay	Standard Fire Brick Co.	Box 654, Pueblo

OPERATING MILLS AND SMELTERS, 1935

Character of Plant	Town	County	Operator	Address
Boulder Ore Sampler	Boulder	Boulder	St. Joe Mining and Milling Company	814 Pearl St., Boulder
Boyle Tungsten Custom Mill	Boulder	Boulder	H. J. Boyle and Associates	846 16th St., Boulder
Nancy Custom Mill	Boulder	Boulder	R. B. Johnston	Boulder
Nederland Custom Mill	Boulder	Boulder	Nederland Milling Corporation	Nederland
Tungsten Custom Mill	Tungsten	Boulder	Gold, Silver and Tungsten, Inc.	940 10th St., Boulder
Tungsten Custom Mill	Nederland	Boulder	Wolf Tongue Mining Company	First Natl. Bank, Boulder
Vickery Custom Mill	Jamestown	Boulder	H. S. Vickery	Jamestown
Argo Mill	Idaho Springs	Clear Creek	King Kong Mines, Inc.	210 Tabor Bldg., Denver
Idaho Springs Sample and Custom Mill	Idaho Springs	Clear Creek	Clear Creek Gilpin Company	Idaho Springs
Mammoth Custom Mill	Silver Plume	Clear Creek	Consolidated Smelter and Metals Corporation	3557 Wazee St., Denver
Ruth Custom Mill	Idaho Springs	Clear Creek	Joseph P. Ruth and Associates	423 Continental Oil Bldg., Denver
Arsenic and Cadmium Refinery	Denver	Denver	American Smelting and Refining Company	120 Broadway, New York City
Colorado Smelting and Refining	Denver	Denver	Colorado Smelting and Refining Company	1277 So. Cherokee St., Denver
Golden Cycle Mill	Colorado Springs	El Paso	The Golden Cycle Corporation	Golden Cycle Bldg., Colorado Springs
Farr Western Custom Mill	Blackhawk	Gilpin	Lloyd A. Farr	Central City
Golden Gilpin Custom Mill	Blackhawk	Gilpin	Golden Gilpin Ore Reduction and Refining Company	Blackhawk
Midwest Milling	Blackhawk	Gilpin	Midwest Milling Corporation	Central City
War Dance Mill	Central City	Gilpin	War Dance Mines, Inc.	Idaho Springs
Arkansas Valley Smelter	Leadville	Lake	Smelting and Refining Company	120 Broadway, New York City
Leadville Metals Milling Company	Leadville	Lake	Leadville Metals Milling Company	Leadville
R. J. Bryant Mill	California Gulch	Lake	R. J. Bryant and Associates	905 Spruce St., Leadville
Mancos Concentrating Mill	Mancos	Montezuma	John A. Christy and Associates	Mancos
Record Mill	Alma	Park	Record Mill Company	216 Majestic Bldg., Denver
Mica Grinding Plant	Pueblo	Pueblo	General Mica, Incorporated	211 First Natl. Bank Bldg., Pueblo
Peerless Clay Grinding Plant	Pueblo	Pueblo	Peerless Clay and Mineral Company	211 First Natl. Bank Bldg., Pueblo
Wile Electric Smelter	Montezuma	Summit	Ore Reduction Company, James A. Watson	Room 711, Brown Palace Hotel, Denver
Cripple Creek Mill	Globe Hill	Teller	Cripple Creek Milling Company	604 First Natl. Bank Bldg., Denver

OPERATING PLACERS AND DREDGES, 1935

Name	Town	County	Operator	Address
Beaver	Nederland	Boulder	D. F. Marble and C. E. Adcock	Rollinsville
Cameron	Nederland	Boulder	John Cameron	Nederland
Colby	Boulder	Boulder	Leamon Vaughn and Associates	Box 202, Boulder
George	Sugar Loaf	Boulder	Nick George	1948 Larimer St., Denver
Twin Lakes	Granite	Chaffee	Neal Lowry	Granite
Clear Creek Gold	Idaho Springs	Clear Creek	Clear Creek Gold Placer Company	Central Savings Bank Bldg., Denver
Newlin Gulch	Littleton	Douglas	R. A. Brown	Shirley Savoy Hotel, Denver
Perry Ault Ranch	McCoy	Eagle	S. J. Gateley	McCoy
Eugene Mines	Blackhawk	Gilpin	Eugene Mines, Inc.	1130 First National Bank Bldg., Denver
Fauntleroy	Rollinsville	Gilpin	Gilpin Tiger Mining Company, J. Raymond Farr	Rollinsville
Lucky Charles	Blackhawk	Gilpin	Lucky Charles Mining and Milling Company	2549 So. Acoma St., Denver
Missions	Russell Gulch	Gilpin	Missions Mines Company	Blackhawk
Morgan	Blackhawk	Gilpin	Richard Leon Cavallo	Blackhawk
Pactolus	Pinecliffe	Gilpin	Prommel Mining Company	731 So. Downing St., Denver
Taylor Gulch	Tin Cup	Gunnison	Sam Hoel	Vernal, Utah
Mitchell	Cowdrey	Jackson	Pure Gold Mining Company	Walden
Roscoe	Golden	Jefferson	Humphreys Gold Corporation	1130 First National Bank Bldg., Denver
Derry Ranch	Leadville	Lake	Mt. Elbert Mining Corporation, J. B. Claybough	Grand Junction
Hallenbeck Dry Land Dredge	Granite	Lake	C. V. Hallenbeck and J. B. Claybough	1114 W. 7th Ave., Denver
Hector	Leadville	Lake	Hector Placer Company	Leadville
New York Gulch	Leadville	Lake	A. B. Cureton	Leadville
Norton, Englebach and Starr	Leadville	Lake	Pan-Due Placer Company	2428 4th Ave., Pueblo
Star Norton	Leadville	Lake	Pantle-Duesing Placer Company	Leadville
Selig	Craig	Moffat	W. H. Selig	Baggs, Wyo.
Timberlake	Craig	Moffat	Gooly Placer Mines, J. C. Roberts	1424 W. 13th St., Spokane, Wash.
Zimmerman	Craig	Moffat	Amazon Placer Syndicate	Great Divide
Omaha	Mancos	Montezuma	Out West Mining Company	852 Main St., Durango
Blake	Naturita	Montrose	Carlisle Tripp, etc.	Naturita
Dolores Placer	Montrose	Montrose	Dolores Placer Company, % F. B. Ellison	Grand Junction
Good Bye Dan	Montrose	Montrose	J. L. Nickols	Fruita
Hardscrabble	Gateway	Montrose	E. E. Sargent	926 So. 4th St., Grand Junction

Horseshoe	Gateway	Montrose	Bell and Austin	Gateway
Placer	Montrose	Montrose	Alex Bowers	Grand Junction
Alma	Alma	Park	Robbins Realty Trust	918 Montrose Blvd., Chicago, Ill.
Beaver Creek	Fairplay	Park	Joe Hawley, J. P. Collins, Grant Shields	Fairplay
Cincinnati	Fairplay	Park	Syndicated Mines, Inc.	Fairplay
East End Alma	Alma	Park	Lode and Placer Mines, Inc.	210 Tabor Bldg., Denver
Fortune	Como	Park	Ralph A. Mack	Como
Harris	Alma	Park	M. E. Harris and Company	Alma
Miller and Shelton	Fairplay	Park	Loren Forgy	Boy 271, Canon City
Old Tarryall Diggings	Como	Park	B. M. Shriver	2309 8th St., Denver
Pawnee	Tarryall	Park	Pawnee Mining Company	Box 167, R. F. D. 3, Denver
Pennsylvanie Mountain	Fairplay	Park	Silverado Mining Company	Box 91, Alma
Wilson	Como	Park	Peerless Mining Company, W. E. Axtell	Eustis, Nebr.
Hornet	Clark	Routt	J. L. Healy	Gilman
Blue Eagle	Silverton	San Juan	A. E. Dalla	Silverton
Boston and Navite	Telluride	San Miguel	S. S. Barrett and Associates	Telluride
Caribeau	Ophir	San Miguel	Lee Fudge	Ophir
San Juan Metals	Telluride	San Miguel	San Juan Metals Corporation	Box 1701, Telluride
Townsend	Telluride	San Miguel	H. J. Brown and Associates	Telluride
Beaver Head	Breckenridge	Summit	Walter Riggle	228 Elati, Denver
Bemrose	Breckenridge	Summit	John C. Hummel	Page Hotel, Denver
Blue River	Breckenridge	Summit	Continental Dredging Company	716 California St., Denver
Buffalo	Dillon	Summit	O. H. Briggs and H. O. Schundler	126 Wall St., New York City
Louie D.	Breckenridge	Summit	Roy West and Associates	Alma
Nigger Gulch	Breckenridge	Summit	Cyrus Ott and Associates	Breckenridge
Royal Tiger	Tiger	Summit	Royal Tiger Mines Company	Tiger
Salt Lick, etc.	Dillon	Summit	Harold L. Briggs	Dillon
Tiger	Breckenridge	Summit	Tiger Placers Company	Tiger
Washington	Breckenridge	Summit	J. H. Teller	University Bldg., Denver
Yuba Dam	Breckenridge	Summit	Godman Lumber Company	314 Denham Bldg., Denver
Hayden	Cripple Creek	Teller	W. S. Moore	Cripple Creek